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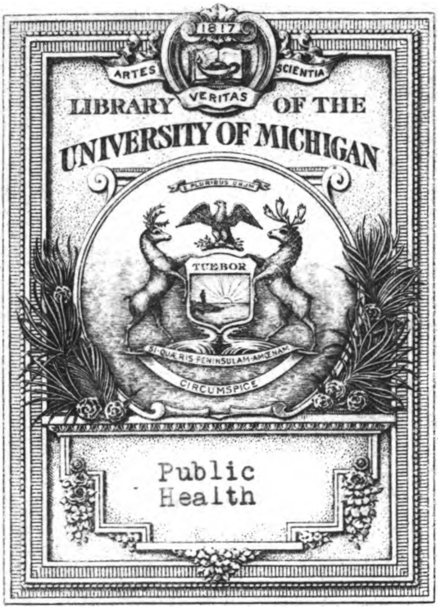

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STATE OF NEW YORK

FORTIETH ANNUAL REPORT

OF THE

New York

(STATE) DEPARTMENT OF HEALTH

For the Year Ending December 31, 1919

VOLUME I

ALBANY
J. B. LYON COMPANY, PRINTERS
1920

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STATE OF NEW YORK,

EXECUTIVE CHAMBER,

ALBANY, *April* 12, 1920.

To the Legislature:

I have the honor to transmit herewith the fortieth annual report of the State Commissioner of Health for the year 1919.

ALFRED E. SMITH.

New York State Department of Health

Commissioner, Hermann M. Biggs, M.D., LL.D.
Deputy Commissioner, Matthias Nicoll, Jr., M.D.
Secretary, John A. Smith, M.D.
Asst. to the Deputy Commissioner, B. R. Rickards, S.B.
Executive Clerk, Fenimore D. Beagle

Directors of Divisions

Division of Sanitary Engineering	Theodore Horton, C.E.
Division of Laboratories and Research	Augustus B. Wadsworth, M.D.
Division of Vital Statistics	Otto R. Eichel, M.D.
Division of Communicable Diseases	Fred M. Meader, M.D.
Division of Child Hygiene	M. Edgar Rose, M.D.
Division of Public Health Education	
Division of Tuberculosis	(Acting Supervisor) Malcolm F. Lent, M.D.
Bureau of Venereal Diseases	(Chief) J. S. Lawrence, M.D. (Surgeon) James C. Ayer, M.D.

Public Health Council

Hermann M. Biggs, M.D., LL.D., New York City, *Chairman*
Joseph A. Warren, A.M. LL.B., New York City, *Secretary.*

Mrs. Elmer Blair .... Albany
Chairman, Public Health Dept., General Federation of Women's Clubs
Simon Flexner, M.D., LL.D .... New York City
Director, Laboratories of Rockefeller Institute for Medical Research
Homer Folks, LL.D .... Yonkers
Secretary, State Charities Aid Association
Henry N. Ogden, C.E. .... Ithaca
Professor, Sanitary Engineering, Cornell University
T. Mitchell Prudden, M.D., LL.D .... New York City
Vice-President, Board of Scientific Directors, Rockefeller Institute for Medical Research
Jacob Goldberg, M.D .... Buffalo
Ophthalmologist, Memorial Hospital.

Consulting Staff

Bacteriologist .... William H. Park, M.D.
Director, Laboratories, New York City Dept. of Health
Animal Pathology .... Theobald Smith, M.D.
Director, Division of Animal Pathology, Rockefeller Institute for Medical Research
Communicable Disease .... Alvah H. Doty, M.D.
Former Health Officer of the Port of New York
Surgeon .... George D. Stewart, M.D.
Professor, Surgery, New York University and Bellevue Hospital Medical College
Dermatologist .... Frederic C. Curtis, M.D.
Former Professor, Dermatology, Albany Medical College
Pediatrician .... L. Emmett Holt, M.D., LL.D.
Professor, Diseases of Children, Columbia University, New York City
Child Hygiene .... Henry L. K. Shaw, M.D.
Former Director, Division Child Hygiene, State Department of Health
Statistician .... Walter F. Willcox, Ph.D.
Professor, Political Economy and Statistics, Cornell University
Public Health Education .... C.-E. A. Winslow, S.B., Dr. P. H.
Professor, Public Health, Yale University
Orthopedic Surgeon .... Robert W. Lovett, M.D.
Professor, Orthopedic Surgery, Harvard University
Orthopedic Surgeon .... Royal Whitman, M.D.
Attending Surgeon, Hospital for Ruptured and Crippled, New York City
Syphilographer .... John A. Fordyce, M.D.
Professor, Dermatology and Syphilis, N. Y. College of Physicians and Surgeons

FORTIETH ANNUAL REPORT OF THE STATE DEPARTMENT OF HEALTH

REPORT OF THE COMMISSIONER OF HEALTH

Letter of Transmittal

His Excellency, Alfred E. Smith, *Governor of the State of New York, Albany, N. Y.:*

Sir.— I have the honor to transmit herewith the fortieth annual report of the State Department of Health.

The year 1919 began with a high mortality and morbidity due for the most part to the receding pandemic of influenza and pneumonia. By March, however, these rates had dropped below the normal for the previous half decade and so continued for the remainder of the year, during the latter part of which the lowest death rate on record was established.

During the pandemic, medical and nursing service were supplied by the State Department of Health to communities where such service was inadequate or lacking, the expense incurred being met from a special fund provided for the purpose by the Governor on the request of the Commissioner of Health. The importance of having trained public health nurses available for such emergencies and the results obtained in those communities where such nurses were already employed, so completely demonstrated the need for the latter that the demand for nurses soon became greater than it was possible to meet at the time. As a result courses for public health nurses have been established or contemplated by several universities in the State. At the present time there are approximately one thousand public health nurses employed in New York State, outside New York city, and the number is rapidly increasing. An effort is made as soon as a nurse is appointed to have her instructed in her new duties by one of the supervising nurses connected with this Department. In order to assist in this instruction, a pamphlet entitled "The Public Health Nurse and the Work She Does" was prepared and issued. A Public Health Nurses' Manual is in preparation. Commencing with January, 1920, a Public Health Nurses' Bulletin will be issued regularly each month and will contain articles, notices and suggestions of value to these field workers.

Many communities have suffered during and since the war from lack of medical service. While this condition was alleviated to some extent by the return of medical men from war duty, there are still many localities in the State where a physician can be obtained, if at all, only after much delay and at a large and in some cases almost prohibitive cost. The Department has endeavored to relieve the situation by obtaining the names of physicians desiring a rural field and supplying these names to such communities and by advertising the names of the communities in several medical journals. While a small number of physicians have been located by these methods, the results have not been commensurate with the efforts put forth. Without greater financial inducement than the average rural community can offer, it is probable that most physicians will continue to prefer city practice. Evidently some method of giving adequate medical supervision and care must be devised to meet the situation. What appears to be the best if not the only solution of the problem is offered in a bill providing for health centers which has been introduced in the Legislature.

During the year the Department has advocated and stimulated the formation of health coordination committees composed of delegates from various interested organizations and the establishment of health centers by local health municipalities. At first the main purpose was to bring all the health activities of a community under one roof in order to secure effective cooperation and coordination between the various branches of public health work, thus increasing the efficiency, reducing the overhead expense of each, and making more money available for the actual conduct of the work. Such health centers as have been established have amply proved their worth. It is now believed that they should be broadened in scope to include general hospital facilities and the services of specialists in the various branches of medicine and surgery and also to offer to isolated localities and rural physicians facilities for more accurate diagnosis and more adequate care of the sick than are generally available. This plan will in no way supersede the local physician, but rather furnish him with facilities which he does not now have. State aid for the establishment and maintenance of these centers will be essential. As has been indicated above, these features have been presented to the present Legislature.

The plan embodies and considerably extends the main recommendations of the Reconstruction Commission, approved by Your Excellency.

For the first time since the establishment of the annual conference of health officers, the public health nurses of the State were invited to attend and participate in the work of the convention. A large number of nurses attended and as a result of the very successful joint conference, the New York State Organization for Public Health Nursing voted to meet annually at the same time and place as the Health Officers' Conference.

The work of the Venereal Disease Bureau, organized in July, 1918, has been greatly increased and intensified during 1919. Over 134,000 people have been reached directly through films and lectures and a much larger number through literature and correspondence. This preventive work has been supplemented by the treatment of approximately 30,000 cases of gonorrhea or syphilis at venereal disease clinics. Over 50,000 laboratory tests have been made.

The work of the Division of Laboratories and Research has been placed on a much more satisfactory basis by the completion of the new, admirably equipped and adapted State laboratory building which tends to relieve the many handicaps under which this work has been conducted in recent years. The work, however, has increased so rapidly that the building is already overcrowded and it has been necessary to continue some of the activities in the old buildings. The service rendered to local communities has been broadened and improved. The organization of laboratories by counties and municipalities has been stimulated and aided since such laboratories can render much quicker diagnostic service. By thus relieving the State Laboratory of work that should be done locally, the Division can give more attention to other forms of laboratory work which the local communities have not the facilities to undertake.

A summarized report of the activities of the various Divisions of the Department is appended.

Respectfully yours,
HERMANN M. BIGGS,
Commissioner of Health.

April 12, 1920

Financial Statement

FISCAL YEAR JULY 1, 1918–JUNE 30, 1919

EXPENSES OF DEPARTMENT OF HEALTH, EXCLUSIVE OF LABORATORIES, SUBDIVIDED UNDER APPROPRIATION, TITLES	Salaries	Care of typhoid carriers	Printing	Advertising	Equipment	Supplies	Traveling expenses
Administration [1]	$62,215 39	....	$5,214 09	$199 40	$1,637 53	$1,465 20	$3,308 76
Public health education [2]	7,437 98	....	5,595 17	....	3,307 18	229 13	2,530 60
Sanitary supervisors [3]	28,286 13	....	100 72	....	174 55	....	8,299 26
Child hygiene [4]	7,540 00	....	4,323 65	....	73 46	114 00	3,232 52
Communicable diseases	21,164 62	$506 50	3,838 59	....	125 18	658 07	952 60
After-care of poliomyelitis [5]	13,700 00	....	517 10	....	28 74	259 63	11,207 10
Tuberculosis [6]	9,985 00	....	3,403 73	....	324 84	172 91	6,126 03
Sanitary engineering	26,653 01	....	221 04	....	654 06	827 17	3,784 47
Vital statistics	29,072 77	....	21,519 06	....	1,225 00	1,515 12	530 39
New York office [7]	21,292 34	....	80 00	....	44 60	74 04	3,524 19
Buffalo office [8]	4,298 34	....	....	....	340 59	5 72	3,426 66
Hornell office [9]	6,636 67	....	26 03	....	20 00	8 55	3,062 17
Venereal diseases	14,779 71	....	3,180 39	....	87 26	398 82	3,995 22
Temporary services	997 41	....	....	....	....	....	....
Total	$254,059 37	$506 50	$48,019 48	$199 40	$8,042 99	$5,728 36	$53,979 97
INFLUENZA EPIDEMIC ACCOUNT	$27,258 06	....	....	....	....	$132 47	$14,391 17
ANNUAL REPORT (whole Department)	....	....	....	....	....	....	....
LABORATORIES AND RESEARCH	148,911 10	....	$3,053 26	....	$17,515 42	$32,587 16	1,786 67
Temporary services	2,498 45	....	....	....	....	....	....
Grand total whole Department	$432,726 98	$506 50	$51,072 74	$199 40	$25,558 41	$38,447 99	$70,157 81

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[1] **Include salaries and expenses of administration, legal, audit and supply, public health council, and drugs.**

[2] Printing includes $3,953.09 cost of publication of "Health News."

[3] Salaries and expenses of nine (9) sanitary supervisors.

[4] Includes salaries $2,640.00 and traveling expenses $2,551.09 of two (2) **supervising nurses.**

[5] Includes salaries $10,200.00 and traveling expenses $9,991.30 of seven (7) **supervising nurses and two (2) muscle testers.**

[6] Includes salaries $2,625.00 and traveling expenses $2,886.98 of two (2) **supervising nurses.**

[7] Includes salaries $8,750.00 and traveling expenses $2,111.69 of three (3) **sanitary supervisors, and salaries $1,198.33 and traveling expenses $888.48 of one (1)** supervising nurse.

[8] Includes salaries $3,000.00 and traveling expenses $641.05 of one (1) **sanitary supervisor, and salaries $1,298.34 and traveling expenses $1,464.94 of one (1)** supervising nurse.

[9] Includes salaries $4,716.67 and traveling expenses $1,885.05 of two (2) **sanitary supervisors, and salaries $1,320.00 and traveling expenses $1,162.22 of one (1)** supervising nurse.

Total traveling expenses of fifteen (15) sanitary supervisors, $12,937.05, **and fourteen (14) supervising nurses and two (2) muscle testers, $180,945.01.**

EXPENSES OF DEPARTMENT OF HEALTH EXCLUSIVE OF LABORATORIES, SUBDIVIDED UNDER APPROPRIATION, TITLES	Communication	Genera plant service	Rents	Purchase and distribution of salvarsan	Fuel, light, power and water	Repairs	Construction	Totals
Administration [1]	$3,257 26	$4 50						$77,302 13
Public health education [2]	639 47	10 25						19,749 78
Sanitary supervisors [3]	166 46							37,027 12
Child hygiene [4]	381 99							15,665 62
Communicable diseases	1,537 91	170 00						28,953 47
After-care of poliomyelitis [5]	1,022 53							26,735 10
Tuberculosis [6]	636 69							20,649 20
Sanitary engineering	1,527 99	43 65						33,711 39
Vital statistics	3,183 41	1,080 00						58,125 75
New York office [7]	1,019 54		$1,500 00					27,534 71
Buffalo office [8]	180 70		420 00					8,672 01
Hornell office [9]	3 35		240 00					9,996 77
Venereal diseases	644 98			$3,200 00				26,286 29
Temporary services								997 41
Total	$14,202 28	$1,308 40	$2,160 00	$3,200 00				$391,406 75
INFLUENZA EPIDEMIC ACCOUNT	1,333 52	221 65						43,336 87
ANNUAL REPORT (whole Department)								7,758 78
LABORATORIES AND RESEARCH	3,893 40	1,379 26	5,599 96		$3,279 53	$2,699 98	$201,439 49	424,643 68
Temporary services								
Grand total whole Department	$19,429 20	$2,909 31	$7,759 96	$3,200 00	$3,279 53	$2,699 98	$201,439 49	$867,146 08

---

[1] Include salaries and expenses of administration, legal, audit and supply, public health council, and drugs.

[2] Printing includes $3,953.09 cost of publication of "Health News."

[3] Salaries and expenses of nine (9) sanitary supervisors.

[4] Includes salaries $2,640.00 and traveling expenses $2,551.09 of two (2) supervising nurses.

[5] Includes salaries $10,200.00 and traveling expenses $9,991.30 of seven (7) supervising nurses and two (2) muscle testers.

[6] Includes salaries $2,625.00 and traveling expenses $2,886.98 of two (2) supervising nurses.

[7] Includes salaries $8,750.00 and traveling expenses $2,111.69 of three (3) sanitary supervisors, and salaries $1,198.33 and traveling expenses $888.48 of one (1) supervising nurse.

[8] Includes salaries $3,000.00 and traveling expenses $641.05 of one (1) sanitary supervisor, and salaries $1,298.34 and traveling expenses $1,464.94 of one (1) supervising nurse.

[9] Includes salaries $4,716.67 and traveling expenses $1,885.05 of two (2) sanitary supervisors, and salaries $1,320.00 and traveling expenses $1,162.22 of one (1) supervising nurse.

Total traveling expenses of fifteen (15) sanitary supervisors, $12,937.05, and fourteen (14) supervising nurses and two (2) muscle testers, $180,945.01.

EXPENSES OF THE BUREAU OF VENEREAL DISEASES, PAID FROM APPROPRIATIONS OF THE UNITED STATES

Administration	Treatment	Repressive measures	Education and publicity	Total
$10,220 69	$59,622 89	$16,047 14	$8,168 41	$94,059 13

Reports of moneys received by the State Department of Health during the fiscal year July 1, 1918–June 30, 1919, and paid to the State Treasurer in accordance with chapter 440 of the Laws of 1910:

Fees for transcripts and searches under section 391 of chapter 619, Laws of 1913, entitled "The Public Health Laws"	$836 60
Registration and licensing of laboratories under chapter 411 of the Laws of 1917...............	117 00
Official order books under section 249-f, chapter 431, of the Laws of 1917	556 93
Rebates on salaries, express, etc..................	117 56
Sale of serum by laboratory	12,991 58
Miscellaneous receipts	66
	$14,680 33

SUGGESTIONS FOR LEGISLATIVE ACTION

Prepared by the Public Health Council and Recommended by the Commissioner of Health

Memorandum as to the provisions of a bill authorizing a county, city or consolidated health district to create and maintain one or more health centres and providing State aid therefor.

Purposes

1. To provide for the residents of rural districts, for industrial workers and all others in need of such service, scientific, medical and surgical treatment, hospital and dispensary facilities, and nursing care, at a cost within their means or, if necessary, free.
2. To assist the local medical practitioners by providing:
    (a) Facilities for accurate diagnosis by a coordinated group of specially qualified physicians and surgeons, both for hospital patients and for out-patients.
    (b) Consultations and advice as to treatment by medical and surgical experts.
    (c) Clinical, bacteriological and chemical laboratory service and x-ray facilities at moderate cost or free when necessary.
3. To encourage and provide facilities for an annual medical examination to detect physical defects and disease, and to discover conditions favorable to the development of disease, and to indicate methods of correcting the same.
4. To provide or aid in securing adequate school medical inspection and school nursing service.
5. To secure or aid in securing better enforcement of the Public Health Law and a more effective administration of public health activities within the area served.
6. To provide a public health nursing service adapted to and adequate for the community served.
7. To aid in securing the dissemination of information in regard to Public Health throughout the area served.

8. To aid in securing adequate compensation for medical and surgical care rendered in hospitals and clinics, in order that efficient service may be everywhere available.

9. To provide laboratories, group diagnosticians, consultants and hospital facilities in the smaller cities and rural districts, and to counteract the growing tendency of medical practitioners to remove to larger centres, and to attract to and to retain in the practice of medicine in these communities a larger number of qualified practitioners of both sexes.

10. To provide medical libraries including books, pamphlets, periodicals, leaflets, exhibits, moving picture films, and kindred educational facilities, with halls for meetings if needed.

11. To provide hospital and other necessary resources for dealing promptly with epidemics.

12. To reduce illness and disability among the industrial workers of the State by providing prompt and accurate diagnosis and efficient treatment for sick and injured workers and the members of their family.

13. To coordinate public health activities within the districts.

Health Centres

1. A health centre may consist of the following parts, any one or more of which parts may be established at one time with the approval of the Commissioner of Health and the formulation of a general plan for the whole centre.

(a) *Hospitals:* The erection of new hospitals or arrangements with other institutions or both, so that they shall form essential parts of the centre. Such hospitals may include as units thereof existing or hereafter established hospitals or pavilions for the care of tuberculosis, for cases of other communicable disease, for children, for cases of maternity and mental diseases and for other groups. Existing tuberculosis hospitals may become parts of the health centre of a city or county by which they may have been established.

(b) *Clinics for Out-Patients,* including especially those now regarded as public health clinics, such as those for tuberculosis, venereal disease, prenatal and child welfare, mental and nervous diseases and defects and clinics for school children, dental clinics, and also medical, surgical and diagnostic clinics.

(c) *Clinical, Bacteriological and Chemical Laboratories,* auxiliary to the State Laboratory, and x-ray laboratories with services at moderate charges, or free, affording modern laboratory facilities needed in the diagnosis and treatment of disease.

(d) *District Health Service* with a district health officer and deputy health officers in various parts of the district, such districts to be either a city or county, or a consolidation of two or more existing health districts (such consolidation to be approved by the Commissioner of Health). The present health officers in these districts shall act as deputies during their present terms of office. In the subsequent appointments of deputies in the various portions of the districts, persons residing therein possessing the qualifications prescribed by the Public Health Council shall have preference. Each local health board shall appoint for its town or village a deputy to the health officer of the health centre district.

(e) *Public Health Nursing Service,* including school nursing for all parts of the district.

(f) *Centre for School Medical Inspection* with proper medical supervision and facilities to enable practitioners to provide adequate treatment for all school children showing physical defects or disease.

(g) *Headquarters for all Health, Medical, Nursing and other Public Welfare Activities* of the district which wish to utilize the centre.

2. The locations, sites, plans and initial equipment of the health centre shall be subject to the approval of the State Department of Health. The State Department of Health and the State Architect shall provide model plans for such centres for any community requesting them.

State Aid to Health Centres

1. To be granted for each hospital bed constructed or provided for under this statute.

(a) For new construction and equipment of hospitals, one-half of the cost to be paid by the State, such payment not to exceed $750 per bed, and beds for the purpose of this provision to be in proportion not in excess of one to each 500 of the population.

(b) A grant of 60 cents per day for every free patient maintained in any hospital operated as a part of a health centre.

2. To be granted for clinics and annual medical examinations.

(a) A grant for the creation of out-patient clinics equal to one-half of the initial cost of establishment, the amount to be paid by the State for this purpose not to exceed $5,000 per clinic, and 20 cents for each free treatment in such clinic; one such centre for each district, provided that in counties or cities or districts having more than 50,000 population there shall be not more than one health centre per 50,000 inhabitants or major fraction thereof.

(b) A grant of 50 cents for each free comprehensive annual medical examination made at the health centre.

3. *For the Maintenance of Laboratories:* A grant from the State of one-half of the annual cost of maintenance of laboratory of health centre, the sum to be paid by the State not to exceed $3,000 per annum for each laboratory, and $1,500 toward the initial installation and equipment of such laboratory.

4. *For Salaries of Deputy Health Officers:* A grant of 10 cents per capita per annum toward the salaries of deputy health officers in health districts having less than 1,500 population, and of 5 cents per capita per annum in health districts having a population between 1,500 and 3,000, in addition to such salaries as they are entitled to receive from the local treasury.

5. The total annual grants for the construction of hospitals and clinics shall not be in excess of $2,000,000, and for the maintenance and operation not in excess of $2,000,000. Salaries and traveling expenses of consultants and experts employed by the State Department of Health, and other expenses necessarily incurred by the State Department of Health in the enforcement of this law, shall be paid from the sum appropriated for grants toward maintenance and operation of health centres — this sum not to exceed $250,000 per annum.

The District Health Officer may be the superintendent of the hospital and general director of health of the district and of the hospital and medical activities connected therewith. The qualifications for district health officers, deputy health officers, superintendents of hospitals and medical activities, chiefs of clinics and other medical officials and nurses shall be fixed by the Public Health Council, and their appointments be subject to the regulations of the State Civil Service Commission.

The work of all health centres, hospitals, clinics, district laboratories, etc., connected therewith shall be inspected and standardized by the State Department of Health, and the state grants shall be paid only on the written approval of the Commissioner of Health.

Provision shall be made for occasional or periodic consultations or clinics at the health centres by specialists in medicine and surgery to be furnished through the State Department of Health, and wide previous public announcement of these clinics and consultations shall be made. At these consultations and clinics, health officers and physicians may bring their patients for assistance in diagnosis and for advice as to treatment. Fees received from these consultations for the State service shall be credited to the hospital or centre where the service is rendered.

The health centre laboratories shall be under the supervision of the Director of the State Health Department Laboratories, in order that their work may be maintained at a high level of efficiency; and the facilities of the State Laboratory service shall be available to supplement those of the laboratories of the health centres.

The salaries of the medical and surgical staff, the fees for medical and surgical care, and the conditions for free service in the hospitals and clinics shall be determined by the Boards of Managers. The method of appointment and the composition of such Boards of Managers of the health centres and hospitals to be provided for in this bill.

SUMMARY OF WORK OF DIVISIONS

Division of Administration

The Division of Administration through its executive officers outlines the policies of the Department, carries out the provisions of the Public Health Law and the Sanitary Code, maintains supervision over the work of the various Divisions and performs such other duties as do not fall naturally to any one of these Divisions.

Health Officers' Courses

Courses for health officers were conducted during 1919 at the University of Syracuse, the University of Buffalo, New York University and at the Albany Medical College. The course at the latter institution has been entirely revised under the direction of Dr. Charles C. Duryee, Sanitary Supervisor of the Department. The total number of health officers who have completed an approved course is 359.

Consolidated Health Districts

During the year 14 health districts have been consolidated. By such consolidation it has been possible to secure greater coordination and greater efficiency. A total of 1,348 health districts are now represented by 1,062 health officers. Six health officers are still in military service.

Adoption of Model Sanitary Code

A total of 759 local boards have now adopted the Sanitary Code regulations recommended by the Department.

Conference of Health Officers

The annual conference of the Department with the health officers of the State was held at Saratoga Springs on June 24, 25 and 26. The experiment was tried of having the public health nurses of the State meet at the same time and place in order that problems affecting both health officers and public health nurses might be discussed in conference: The plan proved so successful that it will be continued at future conferences. A model Health Centre which included a venereal disease clinic, a tuberculosis clinic, a child welfare station, a public health laboratory, a public health nurse's and a health officer's office was in full operation during the three days of the convention. Individual conferences of the sanitary supervisors with the health officers of their districts were held. During the evenings moving pictures on the diagnosis of tuberculosis and other public health subjects were shown. Five hundred and thirty-two officers, representing 716 health districts and 350 public health nurses attended. With guests included, the total attendance was over 1,000.

Among the prominent visitors and speakers were Dr. Simon Flexner, Director of Laboratories of Rockefeller Institute for Medical Research, and Dr. Victor Heiser of the Rockefeller Foundation; Lt.-Col. Homer Folks of the State Charities Aid Association, Dr. L. L. Lumsden of the U. S. Public Health Service, Dr. L. Emmett Holt, Professor of Pediatrics, Columbia University, Dr. Lyman Fisk, Director of the Life Extension Institute, Sir Arthur Newsholme, Former Medical Officer of the Local Government Board, England, Dr. Wm. W. Peter, Secretary of the Joint Conference of Public Health for China, Dr. Livingston Farrand, Director, American Red Cross, Mr. A. W. Hedrich, Secretary, American Public Health Association, Miss Elizabeth Fox, Director of Nurses, American Red Cross and Hon. Abram Elkus, Chairman, Reconstruction Commission of New York State.

Division of Child Hygiene

During 1919 the activities of the Division of Child Hygiene have included the initiation and demonstration of measures to secure the proper organization, establishment, maintenance, extension, standardization and coordination of the needed agencies adequately and effectively to protect the lives and health of children in the communities of the State of New York outside of New York City. Through as much assistance and cooperation of various kinds as possible, the Division has striven to further the interests of the children of New York State. The results obtained have been very gratifying and give every indication that during the coming year not only will the established work be continued more effectively, but that the program of more intensive and extensive efforts which is contemplated will meet with the looked-for measure of success.

Surveys were made and exhibits held in various parts of the State. As a demonstration of how an intensive child hygiene campaign may be carried out, the Division, in cooperation with local health departments and local Red Cross Chapters conducted a series of health exhibits covering the entire county of Westchester. The results of this demonstration, which should prove of valuable assistance to other communities, have been well worth the efforts made.

A large number of conferences, national, state and local were attended by members of the Division staff and many papers were read. More than one hundred lectures on various phases of child hygiene activities were delivered and exhibits, motion picture films, and lantern slides were shown in more than sixty localities.

The compilation and revision of literature was continued and nearly 350,000 pieces of child hygiene literature were distributed. As a part of the effort for more effective prenatal care, a circular on that subject has been completely revised and considerably enlarged and will soon be ready for distribution in its new form.

Efforts to secure the organization of "Little Mothers" Leagues resulted in their number being increased by at least one hundred. Probably a large number of others were formed but have failed to report. Thousands of members of these leagues were graduated.

The Division continued its efforts to stimulate improvement in birth registration, eye prophylaxis in the case of every newborn child, the adoption of pasteurizing ordinances by local municipalities and the frequent holding of better baby contests and similar activities. The Division also cooperated in recommending the establishment of separate units for the care of tuberculous children at Ray Brook and with the State Board of Charities and the State Education Department in relation to the health of children under their supervision.

The visitation of and assistance to child hygiene stations was continued as was that to child-caring institutions such as day nurseries. The Public Health Council amended and added to the

Sanitary Code regulations dealing with child-caring institutions, provisions for the more effective control and supervision of day nurseries. These regulations went into effect January 1, and will soon be supplemented by special departmental regulations. The licensing and supervision of midwives has been assumed by this Division, this activity having been carried on heretofore by the Division of Vital Statistics.

Many additional nurses were appointed locally and 46 new child welfare stations established, making a total of 162 such stations in the State, exclusive of New York City.

A large amount of correspondence was had with individuals, and with various public and private organizations concerning the above and in regard to numerous other phases of child welfare such as prenatal care, maternity and children's hospitals, care and feeding of children, diseases of infants and children, the sale of milk and cream, milk expositions, legal authority for village boards to support child hygiene stations.

The scope, character and extent of the activities heretofore engaged in by this Division have completely utilized all the time and energies of the members of its staff. While excellent results for the better health protection of the children of the State have been secured thus far, the need for more intensive and extensive work in a number of special fields of child hygiene, notably, those of maternity and the preschool period, is such that special efforts will be made during the coming year in these directions. It is hoped and expected that the increase in the personnel of the Division which has been requested will be granted so that the activities of the Division may be effectively directed toward securing the most complete accomplishment of the following minimum requirements for the health protection of all prospective mothers and children:

(a) Education and instruction of the general public and of special groups in the problem presented by maternal, infant and childhood mortality and morbidity and their solution in order to arouse the necessary interest and secure essential support and cooperation.

(b) Specific instruction and supervision by physicians, private and public, and public health nurses at home and at health centers.
  (I) Maternity
    (a) Hygiene of pregnancy and early infancy
      (1) Through at least monthly visits throughout pregnancy to private physicians or to health center until the end of the sixth month and every two weeks thereafter.

        - (2) Literature to be given mother to acquaint her with the principles of the hygiene of pregnancy and of early infancy.
    - (b) Puerperium
      Daily visits through the fifth day and at least two other visits during the second week by physician or nurse.
    - (c) Insuring that every infant is placed under continuous health supervision from birth.
  - (II) Infancy and preschool period
    Instruction of mothers at least once a month throughout the first year and at regular intervals throughout the preschool period in the care and feeding of children.
    - (a) Instruction of mothers at home
      - (1) Value of breast feeding — stressing its importance during at least the first six months.
      - (2) Technique of nursing.
      - (3) Technique of bath, sleep, clothing, ventilation and general care of the baby with demonstrations.
      - (4) Preparation and technique of artificial feeding.
      - (5) Dietary essentials and selection of food for infants and for older children.
      - (6) Prevention of disease in children.
- (c) Periodic examinations (by physicians).
  - (I) Maternity
    - (a) Complete physical examination as early in pregnancy as possible, including examination of heart, lungs, abdomen and urine and the taking of blood pressure.
    - (b) Internal examination and pelvic measurements before the seventh month in primipara.
    - (c) Examination of urine every four weeks during early months, at least every two weeks after sixth month and more frequently if indicated.
    - (d) Wassermann test when indicated.
    - (e) Examination before discharging patient from observation, not later than six weeks after delivery.
  - (II) Infant and preschool children
    - (a) Periodic examination of all children of this group. Weighing and measuring under supervision of physician.
    - (b) Health record for every child from birth.
    - (c) Follow-up by nurses to see that all recommendations for hygienic and corrective treatment are carried out.

For health education and supervision all proper efforts will be made to have new child hygiene stations established where needed, to extend the work of such stations to include the prenatal, postnatal and preschool periods in addition to that of infancy, and to have a sufficient number of public health nurses employed in every municipality. Similar steps will be taken to secure adequate provision for the proper clinical care and treatment of all prospective mothers and children, including, as part of or in addition to that provided by private physicians and bedside nurses at home, general and special hospitals and clinics for maternity cases, children, etc., and for tuberculosis, dental, venereal diseases, and eye, ear, nose and throat, skin, orthopedic and other defects and diseases. The establishment of open air classes and rest periods for pretubercular and certain tuberculous children with grave malnutrition will be urged as will special classes for children needing some form of special instruction due to physical or mental defect, nutrition classes for physically subnormal children, and the maintenance of mid-morning lunches or hot noonday meals when necessary.

The continued active assistance and cooperation of this Division are assured to all local agencies, public and private; similarly reciprocal efforts on the part of those agencies, so unstintedly given in the past, will as always, be sincerely welcomed, availed of, and appreciated by the Division.

Poliomyelitis After-care

On January 1 the number of cases of poliomyelitis in the State, recent and old, for which the after-care had been furnished and which were technically under supervision of the nurses was 1,783. During the first nine months about 300 of them were eliminated for various reasons. On October 1 a careful survey of their districts by the nurses showed 1,481 cases under observation. Of these, 89 apparently have recovered sufficiently to be discharged in the near future, 185 can be dropped as not cooperating; 1,000 are cooperating in the treatment and requiring active supervision, while 198, principally old cases, require only an occasional visit to see that apparatus is properly adjusted. One hundred and one new cases have been reported during the year and of these probably about 70 will eventually come under the care of the state nurses.

The excellent results which have been obtained in the care of old and neglected cases of previous years which have had proper apparatus applied, or have been sent to hospitals for corrective operations, have so advertised the work of the Department, especially among social workers, school and district nurses, that at nearly every clinic one or more new cases are sent in for examination and advice. Not only are cases of poliomyelitis brought in, but cripples from other causes. While these patients are not added to the list of those under the nurses' care, they are all examined and advice given in regard to the proper place for treatment.

During the year 61 clinics have been held in 47 places with a total attendance of 876, or an average of 14.3. Four hundred and seventy-five pieces of apparatus have been sent to patients. This apparatus has been constructed at the Charitable Surgical Appliance Shop of the Children's Hospital, Boston, and has been paid for either by the parents, friends, local organizations, or by the poor authorities.

Patients have been visited by the nurses in 336 different communities in the State, most of them rural and among a class of people who, for geographical and financial reasons, would have been unable to provide special treatment for their children if the State had not brought it to them. Fifty-one patients have been sent to various hospitals for operations and other corrective work requiring close supervision. There have been no deaths among these cases and the results generally have been very satisfactory.

Three years have elapsed since this work was begun and the results, especially among the patients who have followed instructions, have been excellent. It can be stated positively that no child in the State need become a helpless cripple as a result of poliomyelitis, and that most old and neglected adult cases can be restored to lives of partial usefulness.

Division of Communicable Diseases

During 1919 there were reported to the State Department of Health 228,202 cases of communicable diseases, of which 125,013 were outside of New York City. This number is considerably lower than was reported in 1918 because of the outbreak of influenza in that year. During 1918 there were 386,628 cases of influenza reported in the State, exclusive of New York City, while during 1919 there were but 43,650 cases of which 26,767 were reported during January.

Pneumonia has likewise decreased in number of cases. There were 10,616 cases of pneumonia in the State, exclusive of New York City and 22,662 cases in New York City during 1918. During 1919 there were 6,156 cases up-state and 10,325 cases in New York City.

The principal outbreaks of diphtheria have been at Buffalo, where nearly a third of the cases reported in the State have appeared, and at Kingston and Plattsburg.

At Tonawanda a waterborne typhoid outbreak occurred in which 201 cases appeared; 27 cases of typhoid fever occurred at Port Jefferson, and smaller outbreaks in other parts of the State; however, the total number of cases of typhoid reported during the year is lower than it has ever been, namely, 1,697. The smallest number of measles cases, 11,688, has also been reported this year. Scarlet fever cases have appeared in about the same number as in previous years, namely, 7,481.

During the last three months of the year the supervisors have been largely engaged in visiting all of the municipalities in their districts, interviewing the health officers in regard to their stocks of literature and laboratory supplies and giving advice on the solution of local problems. This work has been further assisted by means of conferences of health officers held in the various districts which were also attended by several members from the State Department of Health.

Owing to the successful clinics which have been held in various parts of the State the number of cases of tuberculosis reported during the year has been very much increased, 10,912 cases being reported.

The only other diseases which have been reported in considerable numbers are syphilis with 8,506 cases and gonorrhea with 2,396. This, of course, is due to the activities of the Bureau of Venereal Diseases.

During the year communicable diseases were reported from dairy farms as follows: Diphtheria 43, diphtheria carriers 2, scarlet fever 137, and typhoid fever 14.

Sanitary Supervisors

The daily reports of the sanitary supervisors indicate the breadth and scope of the work which they have accomplished in their districts. The following are a few of their more important activities:

> Post graduate work in public health has been aided in four medical schools in this State;
>
> Scoring of health activities in the various cities of the State has proved one of the most stimulating pieces of work

that has been carried on during the year; a marked improvement having been noted in the local organizations when reinspections have been made;

Courses of training for public health nurses have been supervised;

Health centers have been organized at Oswego, Dunkirk, Binghamton, Syracuse, Schenectady and in other cities;

Health coordination committees have been formed at Norwich, Syracuse, Elmira, Herkimer, Little Falls, Glens Falls, Utica, Rome, Harpursville, Ithaca, Jamestown, Hornell, Livonia, Little Valley and Perry;

Four cities have employed full-time health officers for the first time, namely, Watertown, Poughkeepsie, Niagara Falls and Glens Falls;

The preparation and publication of a manual for health officers, known as "The Health Officer";

The establishment of child welfare stations;

The establishment of county laboratories;

Assistance in the establishment of venereal disease clinics, etc.

Division of Laboratories and Research

During this year of readjustment the spirit of cooperation and enthusiasm which has been manifested by the staff has enabled the laboratory not only to carry on a greatly increased amount of routine work, but to advance the various activities interrupted by war conditions and to undertake new problems. The facility with which the staff handled this constant growth has been greatly enhanced by the improved working conditions and vastly greater conveniences afforded by the new laboratory building, which while not completely equipped, was ready for occupancy on July 1. The new building, reduced in size on account of the increased cost of construction at the time of its erection, is even now inadequate.

The laboratory is fortunate, also, in having Dr. Paul B. Brooks, formerly Acting Director of the Division of Communicable Diseases, as Assistant Director since July 1. His intimate knowledge of field conditions has made him a valuable representative of the laboratory at the various conferences throughout the State, bringing the laboratory and the health officers and sanitary supervisors into closer touch.

The great increase in the routine work of the diagnostic department of the laboratory is a striking demonstration of the need for more local public health laboratories. In 1918 there were 100,159 diagnostic outfits sent out from the laboratory while 150,996 have been distributed up to December 1 of this year; in 1918, 86,183 diagnostic examinations were made and during the first eleven months of this year, 132,199.

The demand for diphtheria antitoxin which has increased steadily since the fall of 1918 has made it necessary to increase the number of horses under immunization. It is exceedingly difficult to care for these animals, under the crowded conditions existing at the farm, and the matter of enlarging the present quarters, or of acquiring another site, is fast becoming an urgent one.

The progress of the social hygiene campaign is evidenced by the amount of arsphenamine being distributed and by the number of Wassermann examinations made during the year. In 1918 the total examinations made by the Branch Laboratory in New York City and by the State Laboratory in Albany was 40,439, while on December 1, 1919 the total was 75,471. The Branch Laboratory continues to serve the army hospitals at Hempstead, Garden City and Mineola, having made 4,179 examinations during the year. There is also a growing demand for arsphenamine for use in various clinics and by approved physicians. The production of this material by the laboratory is being perfected and will, it is hoped, soon reach a point where it can be produced on a large scale and thus enable the State to discontinue purchasing from outside sources. Owing to the already overcrowded conditions in the new laboratory it has been necessary to continue the work of the production of arsphenamine in the old building despite its inadequate facilities.

Special examinations are constantly being made by the chemists in addition to their routine examinations of the public water supplies of the State.

The department for filing and indexing the laboratory researches and scientific papers in the library has grown since its formation in 1918 so that records of the activities of the workers along these lines are available, not only for use in the laboratory, but for reference by workers in other laboratories of the State. The growth of all branches of the laboratory work has been reflected in the larger office staff required to purchase material, to report the results of examinations and tabulate and to file the increasing records and correspondence.

In addition to these more or less routine activities the laboratory has assisted materially in the public health course given for health officers. It has furnished local laboratories with stock culture and agglutination serums and has trained their workers in special laboratory technic. Two of the bacteriologists from the staff have been appointed to take charge of the newly established laboratories in Cayuga and Ulster counties. The organization and administration of the laboratory, as well as its standard procedures, have been the subject of study by representative medical men from Central and South America, who, under the auspices of the International Health Board of the Rockefeller Foundation, are fitting themselves to establish such service in their own countries. Information regarding the organization and the scope and extent of the work has also been given to the French government as an aid in building up the medical service of that country.

It is indeed amazing that despite all the encouraging support which the Legislature and the Governor have given the laboratory it is scarcely possible to meet the steadily increasing demands of physicians, health officers and state institutions. One might reasonably expect that after five years of such phenomenal development a limit would have been reached. But quite the contrary is true; and with the world-wide impetus which the war has given all phases of preventive medicine and the appointment of nearly a thousand public health nurses during the last two or three years, there is no prospect of the laboratory reaching any limit to its growth in the near future; that is, if the laboratory is to do the work that it is called upon to do, and which it should perform.

Division of Tuberculosis

The activities of the Tuberculosis Division during the year 1919, in addition to functions of a regulatory character, comprised essentially the determination of the needs and facilities for effective campaigning against tuberculosis, the initiation and demonstration of preventive measures and the stimulation of their adoption by the local communities of the State, the rendering of advice, assistance and cooperation, and the standardization, supervision and coordination of the work of all agencies concerned.

Inspections and studies were made, constructive criticism and assistance given, and action of approval or disapproval taken with regard to the selection and utilization of sites, the preparation of plans for and the construction of new tuberculosis institutions, and of additions to, and alterations and modifications of those in operation and in connection with the equipment, organization and management of such hospitals and the care of their patients.

During the year five new county tuberculosis hospitals were completed. Of the three others under construction two are almost finished and the third is well advanced. Alterations, modifications and additions to a number of the institutions in operation were also completed, actually begun or the preparations so far advanced as to make their carrying out a practical certainty.

The work carried on by the various institutions showed a constant and progressive increase in efficiency. In the case of two hospitals full-time superintendents were appointed in place of men who had served in a part-time capacity. It is hoped and expected that in the remaining institutions where such partial service is at present still supplied the same change will be effected.

A very successful course of instruction for county hospital superintendents was given at the Ray Brook State Hospital for Tuberculosis.

Efforts to have the tuberculosis dispensaries made part of general health centers were successful in a number of cases and the indications are that this will be the result with regard to the others.

Public health nurses engaged wholly or in part in tuberculosis work were supervised and assisted, and as a result of stimulation a large number of new appointments were made locally. Of the 57 counties of the State of New York, exclusive of New York City, 31 have made provision for county tuberculosis nurses. In addition there are a very large number of city and village public health nurses engaged in tuberculosis work.

In order to secure assistance in connection with the tuberculosis surveys that were held and for the purpose of demonstrating the value and practicability of instruction in public health nursing as part of the course of instruction of hospital training schools for nurses, short courses were given at the hospitals of three cities of the State. These courses were exceptionally well attended and have already shown their utility.

The educational work of the Division included attendance at many conferences and meetings, formal and informal, of national, state and local bodies, public and private, where papers were given or lectures delivered. A film on the diagnosis of tuberculosis, prepared and loaned by the United States Army Medical Department was shown with excellent results in various parts of the State, short courses were held in many localities. The Department's tuberculosis literature was revised and very large quantities were usefully distributed.

The State Civil Service Commission was cooperated with in the conduct of examinations of applicants for appointment as tuberculosis hospital superintendents and county tuberculosis visiting nurses. Cooperation was also given to other state departments, including the State Board of Charities, State Education Department, and State Architect, in connection with hospitals, dispensaries, tuberculous school children, separate units at Ray Brook for tuberculous children and other similar matters. The assistance and cooperation of the Tuberculosis Committee of the State Charities Aid Association was of value.

The efforts to secure the discovery of all cases in order to bring them under the necessary medical and sanitary supervision at the earliest possible time were markedly intensified and the results are already evident. The ratio of reported cases of tuberculosis to reported deaths from this disease for the year 1919 was 1.77 to 1 for New York City and 1.86 to 1 for the remainder of the State, whereas for the 6 year period 1908 to 1913, inclusive, the figures were 2.45 to 1 and 1.1 to 1 and for the 5 year period 1914 to 1918 inclusive, 1.88 to 1 and 1.73 to 1 for New York City and the remainder of the State respectively. The well marked improvement in up-state reporting since 1914 was decidedly accelerated during 1918.

One of the most notable achievements during the year, and one which gives every indication of accomplishing more than perhaps any other single line of activity, was the conducting of tuberculosis clinics in a number of counties of the State, in accordance with the policy outlined in the annual report of this Division for the year 1918. The program was carried out in conjunction with the Tuberculosis Committee of the State Charities Aid Association, and with the active assistance and cooperation of the State Tuberculosis Hospital at Ray Brook, the State Department of Education, local health officers and physicians, superintendents and medical staffs of local tuberculosis hospitals and dispensaries, tuberculosis and other nurses engaged in public health work, social workers and other agencies, public and private.

Two hundred and thirty-three tuberculosis clinics were held in 36 counties of the State. At these clinics 8,619 patients were examined and of this number 485 (17.22 per cent) were found to be positively tuberculous and 1,703 (20 per cent) were diagnosed as suspicious. Of 783 positive cases 523 or 66.7 per cent had not been reported previously as having tuberculosis.

On October 1, 1919, Dr. Malcolm F. Lent was appointed Supervisor of Tuberculosis, to succeed Dr. Rose, who was transferred to the position of Director of the Division of Child Hygiene.

Division of Public Health Nursing

During the year 1919 progress in the work of the Division of Public Health Nursing has been marked by the inauguration of several new activities in addition to the carrying out of the well-established program of former years. For the first time in the history of the Department the public health nurses of the State were invited to attend the Annual Conference of Health Officers held this year at Saratoga Springs. At this conference 350 public health nurses employed by local boards of health, school trustees, private organizations, industries, insurance companies and philanthropic societies were in attendance. As a result of this meeting the State Organization for Public Health Nursing has voted to meet annually with the health officers in conference, realizing that by so doing they will be brought in close touch with every phase of public health work in a manner impossible at meetings conducted solely for public health nurses.

Previous to the holding of the conference a complete census of the public health nurses of the State was made, showing 955 nurses employed as follows: 17 by the State Department of Health; 163 by local boards of health; 224 by boards of education; 123 by various industries; 60 by industrial insurance companies; 317 by private organizations and 51 jointly by several departments of the municipal government or in conjunction with local philanthropic organization. When it is considered that five years ago in the State outside of the city of New York there were fewer than 100 public health nurses employed, it is evident that the value of their services in executing the duties designated by local health authorities and the broader program of health protection as outlined by the State Department of Health is recognized.

During the past year, in order to visualize the work of the public health nurse a scenario for a moving picture film has been prepared by the Division of Public Health Education. This film will soon be available in the districts where the employment of public health nurses is desired. In order that important information relative to public health nursing may be furnished to all nurses engaged in the work throughout the State, during the coming year a monthly "Public Health Nurses' Bulletin" will be issued by the Department. A circular entitled "The Public Health Nurse and the Work She Does" has also been prepared, outlining the duties and activities of the public health nurse for the use of nurses, health officers, physicians and others interested in the subject.

A list of nurses' registries throughout the State has been secured during the year and is on file in the Albany office of the Department. Through this registry the number of public health nurses available for employment in the event of an emergency is easily obtainable. The need for this information became apparent during the influenza epidemic last year.

In order to extend the present activities of the Department to improve the conditions of health and welfare of the industrial workers of the State a survey of one of the largest industrial plants having a well organized health program was undertaken by one of the state supervising nurses in order to learn what was being done in that particular industry to inform employees in the ways of healthful living and how to avoid and overcome the handicaps of occupation to which they might be exposed. It is planned to carry on similar work in other industrial plants in the State and to enlist the interest and cooperation of other employers in a similar program.

During the past year, in order to secure exact information as to the number of public health nurses needed to provide adequate service in rural districts of the State each of the fifteen Department sanitary supervisors was asked to furnish a list of the number of nurses needed in their respective districts and to suggest locations for their headquarters. From the information thus secured it appears there is urgent need of the appointment of at least 404 additional public health nurses in the rural districts of the State.

Although details of the plan for cooperative public health work between the State Department of Health and the American Red Cross have not yet been fully worked out, there is under consideration a proposition to materially increase the public health nursing facilities of the State as a result of such a cooperative agreement, thus meeting the need for rural public health nursing service temporarily or until local municipalities can take over maintenance of these nurses.

Of the nurses employed in this Division one has been assigned to each of the following activities: Supervision of child hygiene, midwives, tuberculosis, venereal diseases and social service work, industrial hygiene, public health education, and communicable diseases. Eight nurses are assigned to the supervision of after-care of poliomyelitis. Records of such activities will be found in the reports of the various Divisions.

As the activities of this Division increase and become much diversified it is apparent that they should no longer be supervised by the Secretary of the Department in addition to his other duties.

Unquestionably much more efficient work could be accomplished in the Division if a full time properly qualified public health nurse, possessing the requisite experience in this important branch of public health work could be placed in the position of director of the Division. It is sincerely hoped the Legislature at the coming session will make suitable appropriation for the salary of such a director.

Bureau of Venereal Diseases

The work of this Bureau has grown with remarkable rapidity during the past year. As the epidemic of influenza subsided in the early months of the year, various municipalities turned their attention to a study of the venereal disease problem. The Bureau stimulated this interest by making personal visits to the larger cities and by holding interviews with the health officer and other officials concerning the manner in which the work should be taken up. A fund of $99,090 allotted to New York State from the Federal government by the Chamberlain-Kahn Act became available toward the close of 1918. By the use of this fund we were able to increase our staff in response to the great demands made upon it. It was also possible to print and distribute large quantities of literature and to assist municipalities to meet the expense of establishing and conducting clinics until their new budget could be prepared. A portion of this money was taken to develop a social service department, the need for which was most urgently felt.

The special rules and regulations governing the submission of specimens to the laboratories for diagnosis which the Commission was authorized to formulate, were published in January. To these were added definitions of what should be considered the infectious state of syphilis and gonorrhea and also a statement authorizing municipalities to provide isolation and quarantine in certain cases. Up to December first, 72 municipalities had adopted these rules and regulations as a part of their Sanitary Code. The legislature by amendment made more effective the public health measure passed last year for the examination of suspected cases and those arrested for vagrancy. The definition of vagrancy was made more comprehensive and specifically stated in another measure.

The educational campaign conducted by the Bureau met with most enthusiastic support and was rapidly extended and carried over into the summer months when it was temporarily discontinued to be taken up again in the autumn. Every educational measure applicable to public audiences was used and every type of audience was addressed. Both male and female physicians and laymen were employed for this purpose.

Four men and nine women were attached to the staff or temporarily engaged as lecturers during the year. From January first until November first, they addressed 514 different audiences, reaching a total of 129,821 people. A copy of the film "Fit to Fight" was purchased from the Army and used at some of the men's meetings and a copy of "The End of the Road" was loaned from the Y. W. C. A. for use at women's meetings. At 83 of these lectures one of the films was used and a total of 65,365 people heard the lectures and saw the films. No film was used at 431 of the lectures. These audiences can be divided as follows: (No boys or girls under 16 years were allowed at the meetings where the films were used.)

	Without film	With film	
Men	31, 426	29, 880	
Boys	9, 840	18, 900	
Women	13, 354	9, 815	
Girls	9, 836	6, 770	
	64, 456	65, 385	
			129, 821

Twelve different Rotary Clubs were addressed at their regular meetings and in several instances the clubs arranged additional public meetings. In 26 different cities the men and women in industry were addressed in the plants either during the noon hour or on time allowed by the employer. High schools were not addressed unless the lecturers were directly invited by the school principal. Several of the groups of young men under the State Military Training Commission were addressed at their regular training period. Other audiences addressed included Y. M. C. A.;

Y. W. C. A.; W. C. T. U.; fraternal organizations; ministerial conferences; Women's Federation of Clubs; Association of Druggists; Associations of Ophthalmologists; Magistrates Association; Farm Bureaus, etc.

Five pamphlets were especially prepared by the Bureau for distribution among young women, young men, parents, business officials and general public. These have bad a very wide circulation, more than 500,000 copies having been given out during the first ten months of this year. In addition, seven pamphlets have been distributed in bulk for the Public Health Service, and then reprinted by us. Thus far approximately 36,000 copies have been given out. Two pamphlets were reprinted from copies used by the War Department and one from a pamphlet used by the Minnesota Board of Health. The distribution was in answer to requests received at the department or by the U. S. Public Health Service and referred to us. Pamphlets are always handed to those attending the lectures or viewing the exhibits. Five posters have been prepared and distributed. One adapted for use where men congregate was posted in every railway station in the State and in many of the coaches. This poster and another adapted for women were widely distributed in public places. In all 866,354 pamphlets and 4,705 posters have been given out. In our publicity plans the news columns of the daily papers, both urban and rural, were employed. Articles were especially prepared on certain phases of the work or in announcing the lecture at a public meeting and again reviews were sometimes written and all offered to the local papers for their use. As an evidence of the cooperation secured from the editors we have had 742 clippings totaling 5,362 inches sent us by clipping bureaus.

Eight copies of two card exhibits and four sets of a lantern slide exhibit were procured and installed at the State Fair and at eight of the largest County Agricultural Fairs. This exhibition was viewed by more than 576,719 people. A representative of the Department was always in attendance to distribute literature and to explain the exhibit. These cards and slides have also been furnished to Y. M. C. A.'s, and other organizations for use in their buildings or under their direction in industrial plants. They have usually been on exhibition in the towns during the time our lecturers were conducting public meetings there.

Therapeutically the campaign has progressed very rapidly under the stimulation of the Bureau. Twenty-eight cities now have one or more dispensaries where free clinics for the diagnosis and treatment of syphilis and gonorrhea are conducted. For most of these clinics the equipment was furnished by the Department from federal funds allowed us through the Chamberlain-Kahn bill. Some of the dispensaries are conducted in conjunction with an established hospital or general dispensary, while others have been opened by the local health departments under whose supervision they remain. Usually they are combined with other public health clinics. The surgeon in charge is chosen by the local health authorities, subject to the approval of the Bureau. Arsphenamine is furnished to the clinic by the State free of charge for use in cases where the patients are unable to pay. Only such patients are treated at the clinics. In the first ten months of this year 3,937 new patients, of whom 2,812 were males and 1,125 females, were admitted for treatment at these clinics in cities other than New York City. Of this number 2,195 were found to have syphilis and 1,452 had gonorrhea. A total of 29,192 treatments have been administered in these first ten months and 7,909 grams of arsphenamine distributed. As a further subsidy to the clinic we have advertised it in the local newspapers when they could be persuaded to carry it. We have carried 15 such advertisements for from one to three months totaling over 2,500 inches of double column space. The establishment of these clinics and their advertisement have so stimulated the local interests in having the diseases treated that all physicians who are willing to care for this work report their practice increasing. Responding to this new interest some physicians who previously refused to treat either syphilis or gonorrhea are now doing so. This increased cooperation on the part of the practitioners will seriously affect the business of the quack. To assist those physicians, who in the past have not treated these patients, to refresh their memories in regard to modern methods of diagnosis and treatment, we have arranged with several of the larger hospitals in New York City to permit men, whom we recommend, to work in their clinics for a month. Many physicians and surgeons, particularly those in charge of our clinics, have availed themselves of this privilege.

During the year our surgeon and one or two members of the staff met with more than thirty of the county medical societies and demonstrated the administration of arsphenamine by treating patients secured by them. At the same meeting a paper was read on the methods of diagnosis and the importance of excluding syphilis and gonorrhea when symptoms are vague and diagnosis of complaint difficult. Over 800 physicians and 200 nurses attended these meetings. Invariably a keen discussion of the papers followed. At the Annual Conference of Health Officers a venereal clinic was made a part of the health center demonstration and a full equipment was installed. A member of the staff was in attendance at all times demonstrating various phases of the work. In a measure the results of such concrete demonstrations can be shown by the increased number of specimens received by the laboratories. In December 1918, they reported having made 374 positive examinations for syphilis and 55 for gonorrhea, while in October 1919, they reported 966 positive examinations for syphilis and 268 positive for gonorrhea, an increase of almost 200 per cent. From January 1, 1919, until December 1, they reported 7,982 positive examinations for syphilis and 2,070 for gonorrhea.

The state and county institutions, prisons, reformatories and homes were visited by several members of the staff and a meeting of their representatives responsible for the health of the inmates was held in Albany for the purpose of studying methods of cooperating with them in securing satisfactory treatment for all infected persons before they are liberated. Free arsphenamine is being furnished them and our consultant and nurse have assisted in developing their work. Efforts are being made to have all hospitals admit patients for treatment while in the infectious stage and to make routine examinations for syphilis and gonorrhea on all patients admitted. All of the state institutions where the personnel is adequate are cooperating in these efforts.

The druggists have been called upon to cooperate in enforcing the law requiring that treatment be given only by prescription from a qualified physician. They have willingly agreed to discontinue treatment or the sale of patent nostrums, except on prescription from a physician.

A manual of treatment prepared by our consultant has been distributed among the physicians of the State and another prepared by the U. S. Public Health Service has been sent to all physicians who returned a postal card questionnaire previously sent them. To meet a demand from the physicians and surgeons for more information on signs and symptoms of syphilis and gonorrhea in certain stages, a series of case histories is being prepared and will be mailed at intervals to all physicians in the State.

Since the successful treatment of syphilis and gonorrhea is a long and tedious process and since all but a very few of the patients are ambulatory cases, there is a great temptation on their part to grow careless of their regular attendance at the clinic after the most prominent symptoms have disappeared. This fact has made it necessary to devise means for continuing the interest of the patient in his treatment. In some instances the services of the police have been warranted, but a more desirable method has been to employ a nurse or social worker to do follow-up work. This has opened an immense field. The social worker has frequently found upon visiting the home of a delinquent patient that other members of the family needed medical care and by inviting them to the clinic has extended the services of the clinic very markedly. The importance of the work was so evident that the staff was enlarged to include a director and five supervisors of social work. The supervisors help the nurse attached to the local clinic to develop her follow-up work and also to help to interest civil authorities and civilians in cooperating in the work of controlling the spread of syphilis and gonorrhea. The latter is accomplished by personal interviews and conferences. Police officials as well as such organizations as the Salvation Army, Rescue Missions and Settlements have been interviewed, advised of the location of the clinic and urged to send there for treatment those whom they find to be infected. They also hope to accomplish a great deal by stimulating the organization and establishment of well managed facilities for recreation for the young people. In order to attack this problem intelligently, an exhaustive social survey is made of the city as one of the first moves. Thus far seven social surveys have been completed and five others are under way. Eighteen social workers or nurses doing social work in connection with the clinics are either in full or part paid by us and directed in their special work by our supervisors. Social work of this nature is in its infancy and progress must necessarily be slow but as people are impressed with the importance of securing treatment for the infected as the surest means of limiting the spread of these diseases so will grow the scope and efficiency of the activities of the social worker.

The plans for the future development of this campaign include the equipment of a state sanatorium for the commitment and treatment of those persons who have no criminal record but who are infected and who can not be relied upon to cooperate voluntarily with the physician by following his advice while in an infections stage. Many persons to whom clinic facilities are not available and who can not afford private care, would willingly be committed to such a sanatorium. Careful social work embracing school and industrial training should be made an important part of this institution.

More extensive medical work among the institutions of the State where medical care is poorly provided is a great demand that is made upon this Bureau. More physicians and nurses will be required to efficiently cope with this need.

Social investigation of the homes from which the inmates of the state hospitals are taken is a very important piece of work to be undertaken at an early date. Social work in the rural districts is to be developed, and efforts made to increase the social facilities of each clinic.

An intensive educational campaign will be conducted among the boys and girls of the State, working through the clubs, training camp commission, industries, etc. Leaders of boys' and girls' organizations will be called in conference to develop plans for this work.

There is great need of additional clinical facilities for New York City. A large clinic thoroughly equipped for the most approved treatment of syphilis and gonorrhea, open at all hours, in charge of the most capable surgeons and social workers that can be procured should be established in the lower city near the waterfront. In this locality are many men who need treatment but will not go up town to the hospital clinics. These men are foci of infection and should not be allowed to go without treatment. The attendance at a clinic at this place should always be large so that the clinic could serve as a school for teaching physicians from all parts of the State and other states the most modern methods of diagnosis and treatment.

Division of Public Health Education

Unless the public understands the meaning of and the reasons for a law or regulation, there is a distinct tendency to disregard it. Particularly is this true in the case of health laws and regulations since in many cases they work an individual hardship for the benefit of the many. It is therefore not only desirable but necessary to keep the public fully informed regarding the latest developments in public health. That this fact is now generally recognized by health authorities and organizations is shown by the growth of this branch of the work.

The policy adopted last year of making each number of the HEALTH NEWS a symposium on some public health subject of timely interest has been continued, since the demand for individual copies aside from the regular mailing list and the comment contained in letters received indicates that this method enhances the value of the various issues. Copies of the Health Center, The Tuberculosis Survey and the Indian Reservation numbers in particular, have been requested by many health officials and voluntary health organizations in various parts of the country. Two Conference numbers containing many of the papers read at the Annual Health Officers' Conference, served to take the place of the more expensive individual volume formerly issued by the Department.

The OFFICIAL BULLETIN, in addition to publishing new public health legislation and the amendments to the Sanitary Code, has contained the special rules and regulations relating to the collection of specimens for diagnosis of syphilis and gonorrhea and governing methods of treatment for these diseases besides a number of opinions of the Attorney-General on matters pertaining to public health. The BULLETIN serves also as a valuable means of conveying official and semi-official information to health authorities throughout the State in a form convenient for ready reference.

A complete revision of the mailing lists of both the HEALTH NEWS and the OFFICIAL BULLETIN has been completed during the year. Commencing with the first of the year the OFFICIAL BULLETIN will henceforth be known as the HEALTH OFFICERS' BULLETIN, and a new publication, THE PUBLIC HEALTH NURSES' BULLETIN, will be issued monthly.

As heretofore, news letters sent to every newspaper in the State were used to inform the public on matters of particular importance or interest.

A digest of the war activities of the various Divisions of the Department and of members of the staff was compiled and sent to the historian of the War Department at his request. A report on "Recent Advances in Sanitary Practice," was also prepared at the request of a Committee of the State and Provincial Boards of Health.

During the year the Department was notified that in fifty-eight rural communities medical service was lacking or inadequate. Insofar as possible, assistance was rendered by sending these communities the names of physicians desiring rural locations, also by sending a list of these places to physicians who wrote for information regarding places where medical services were inadequate or lacking. A number of physicians were thus located, but the fact is evident that the average practitioner prefers urban life even at a financial sacrifice.

At the Conference of Health Officers at Saratoga, June 24, 1919, a model health center was established and operated. Judging from the attendance, it served to arouse great interest in this method of conserving and coordinating health activities. As a direct result of this exhibit a request was made by the American Red Cross for the services of a member of the staff for the purpose of organizing a similar exhibit at the annual convention of the American Public Health Association at New Orleans.

A series of slides illustrating the organization of tho work of the New York State Department of Health was loaned to the Tuberculosis Association of New Mexico for use in their propaganda for a state health department which was later established by an act of the Legislature.

As in former years, the Division had general charge of the revision of circulars and pamphlets and the editing of all new literature issued by the Department. Amendments to the Sanitary Code in form for pasting in the manual were issued to all health officers in order that their public health manuals might be kept up-to-date.

EXHIBITS

During the past year the exhibit work has been conducted along much the same lines as heretofore. The loaning of lantern slides, motion picture films and other exhibit material is going on constantly, there being a very great demand for health exhibits from a large variety of local organizations and interests. The extensive collection of panels on child welfare acquired during the past year has been in constant use and has been very well received.

Aside from routine work the most conspicuous new undertaking was the purchase and fitting up of the healthmobile. This is a large motor truck equipped with a special body and furnished with a complete motion picture outfit, an electric generator, motion picture projector and a variety of screens. With this car it is possible to visit small and remote communities and to show health films and other exhibits, either independently or in connection with health projects of one kind or another. Since the car generates its own current it can be used independently of the local source of electricity and the projector and screen can be easily mounted on the top of the car, thus making out-door movies possible. If desired a screen may be rigged against a tree or building and the motion picture machine mounted in or on the car and the pictures thrown from a greater distance, thus permitting the use of a larger screen than can be put on the roof of the car itself. The car can also be parked outside of a hall, church or school and by carrying a lead into the building, the motion picture exhibition may be given indoors. The outfit was first used in connection with exhibits at county fairs and the State Fair and has since been tried out in several sections of the State. It is now believed that the car is fully equipped and the crew proficient in handling it. Next spring it is expected that the healthmobile will be sent out on the road just as early as weather conditions will permit and will be kept in constant use throughout the season. Incidentally it has provided a convenient means of transporting exhibit material.

Experience has shown that there are few more effective or more popular means of public health education than motion pictures. A number of new films have been purchased this year including two copies of a two reel film on child welfare work, a two reel film on venereal diseases and one reel pictures on infant feeding, the fly, the mosquito, the eye, and tuberculosis. For a long time there has been a constant demand and an urgent need for a film on public health nursing but there was nothing satisfactory on the market. In cooperation with the National Organization for Public Health Nursing, the production of such a film has been undertaken. This work is nearing completion and it is hoped that the new film will be available for general use by the first of the year. It is believed that this new motion picture will be most useful as efforts have been made to insure its accuracy of technique and teaching, and the production having been supervised constantly and carefully by both the supervisor of exhibits of this Department and representatives of the National Organization for Public Health Nursing.

As heretofore a large number of exhibits have been held throughout the State both by this Department and by local agencies with which we have cooperated. The demand for such exhibits is constantly growing and if funds and staff permitted this work could be very greatly and profitably expanded.

In addition to the regular exhibit work the supervisor of exhibits has also arranged a large number of lectures during the past year, having had charge of booking dates, for all of the addresses of one of the sanitary supervisors and one of the department supervising nurses. These two speakers have been engaged practically all the time in lecturing to and instructing small groups of men and women throughout the rural part of the State on various aspects of private and public health. The constant aim has been to arouse interest in public health work and to secure the interest of the community visited in definite concrete measures for improving health conditions. Stress has been laid particularly upon public health nursing. The Division has also cooperated with the Bureau of Venereal Diseases by arranging their lectures on this subject since the first of July.

Division of Sanitary Engineering

The resumption of engineering activities generally through the State, following the substantial return to peace conditions, has resulted in an unusual demand for consultation and advice and in an increase in the number of plans for sanitary engineering work required by law to be submitted to and approved by the Commissioner of Health. This work has been accomplished under difficult conditions, partly because of the absence of members of the staff who have been in military service, partly because of resignations of staff members to accept more lucrative situations elsewhere, and the difficulty experienced in temporarily or permanently filling these positions.

Briefly stated, the work of the Division comprises the examination and approval of plans for sewerage and sewage disposal; the investigation and control of the sanitary quality of public water supplies; the investigation of public nuisances; the examination under order from the Governor into conditions of nuisances affecting life and health; the examination of the sanitary conditions of state institutions; the inspection of sewage disposal plants; the investigation of the construction and operating efficiency of milk pasteurizing plants; the examination and approval of plans and expenditures for county mosquito extermination commissions; assistance to boards of supervisors in the matter of water supply and sewage disposal at county tuberculosis hospitals; the investigation of typhoid fever outbreaks, due to waterborne infection; consulting advice of a general nature to municipalities, corporations and individuals in regard to water supplies, sewage disposal and general sanitation; and educational and research work so far as possible within resources available.

Broadly speaking, the development of scientific knowledge and experience during the year in regard to both water supply and sewage disposal has been substantial. In the water supply field considerable additional knowledge has been gained in regard to disinfection of water generally and particularly under military and other emergency conditions. In this latter field also we witness the application of new methods of filtration, such as the drifting sand filters at Toronto, and the use of pressure sedimentation tanks in connection with pressure filters.

In the sewage disposal field we find a corresponding added knowledge in purification methods, particularly in regard to preliminary treatment. Self-cleansing sewage screens, more uniform and effective sedimentation velocities in tanks, mechanical means of sludge removal in sewage tanks, and more economical and effective methods of applying air and operating tanks in the " activated sludge " process, are lines along which research and experimentation have been successfully carried on during the year. So important in fact has been this acquisition of knowledge that there is good reason to believe that some of these new devices will, on account of their simplicity, efficiency, or economy, supplant in part at least present methods of sewage treatment.

Concerning details of what has been accomplished by the Division during the year, the following summary is presented which gives numerically and in classified form the work in its various phases or subdivisions for 1919 and for comparative purposes the same information for the year 1918. The summary is taken from the monthly reports of the Chief Engineer to the Commissioner:

	1918	1919
Letters and other correspondence referred to the Engineering Division	3,088	2,666
Communications and reports sent out	4,844	4,323
Plans examined and reported upon	130	125
Investigations of public water supplies	160	154
Investigations of sanitary conditions of state institutions	12	14
Investigations relating to sewerage systems	16	10
Investigations of sewage disposal plants	8	17
Investigation of milk pasteurizing plants	328	403
Investigation of stream pollution and public nuisances	48	47
Conferences held with local officials	272	328
Lectures and addresses by staff	12	6

With reference to any special features which characterize the work of the Division for 1919 attention may be called first to the unusually large number of appeals from water boards and water companies for advice or practical assistance in providing for or maintaining the sanitary quality of their supplies. Many of these requests have been due to unusual local conditions brought about by insufficient yield, inadequacy of equipment, and, in some cases, entire lack of equipment for properly safeguarding the sanitary quality of the supply. One serious typhoid fever epidemic at Tonawanda, and a less serious one at Mechanicville occurred during the year, directly traceable to inadequate protection, in spite of the repeated warnings of the Department. In these cases as in others where possible epidemics were threatened, investigations, reports and special advice in the field assisted materially in lessening or removing the danger.

Attention is called to the increased number of water purification plants installed in the State during the year. New filter plants or additions to existing plants have been installed at Auburn, North Tarrytown, Olean, Watervliet and Wappingers Falls. Chlorination plants, or additional units have been installed at Canastota, Canton, Gloversville, Highland Falls, Johnstown, Saratoga Springs, Silver Creek and Tonawanda. These plants have materially increased the amount of purified water served the inhabitants of the State, the total number of people now furnished with such water being 6,975,000 or 64 per cent of the total population. Incidentally, but illustrating the significance of these improvements, the typhoid fever rate in the State which in 1906, the year the Engineering Division was established, was approximately 20 per 100,000 of population and which had been reduced to 5.4 at the end of 1918, has been still further decreased to approximately 3.5 at the close of 1919.

Additional progress has been made during the year in the improvement of sanitary conditions of milk pasteurizing plants supplying cities outside of New York City, resulting from the continued investigation and reports on these up-state plants. The extent of our work was, however, somewhat curtailed because of the absence in military service for a portion of the year of the assistant engineer in charge of these investigations.

Up to this time reliance has been placed entirely upon advisory and educational means to bring about improvements in the sanitary conditions of construction and operation of these plants. No coercive or legal actions have been attempted, or in fact have been deemed wise, under the somewhat limited provisions of the law; but notwithstanding this, a very marked improvement has resulted generally, evidenced primarily by the fact that of some 2,800 or more recommendations made as a result of original inspections, some 1,400 or 50 per cent have been carried out. It is believed, however, that the limit of present means of dealing with pasteurizing plant owners has been reached and that if any marked additional progress is to be made in conditions, more authoritative measures must be applied in the future, granted either through action of the Legislature or the Public Health Council.

Two special investigations of public nuisances of considerable importance have been carried on during the year. One of these has reference to gases and vapors arising from the large industrial plants in Edgewater, N. J., and affecting residents of the Riverside Drive section of New York City. The other has reference to the discharge of crude oil from oil tankers and oil plants affecting bathing beaches and yachting in the vicinity of New York City and adjacent municipalities.

The first investigation referred to is one of long standing and originally involved some eight large industrial plants. The causes of the objectionable conditions were difficult to trace and in many respects more difficult to correct. After five years of investigation, litigation and scientific study and by a system of successive elimination, it has been possible to fasten the responsibility upon the last plant which originally shared in the causation of the extensive nuisance. This plant, the Corn Products Refining Company, has finally accepted its responsibilities at the end of the year and has started the installation of gas and vapor purification apparatus which is designed to remove the objectionable conditions.

The other investigation, relating to the discharge of crude oil into New York Bay and adjacent waters, was ordered by the Governor under Section 6 of the Public Health Law upon complaint of the Waterway League of America. This investigation, which covered a period of some six weeks, and required the services of one-half the engineering force, disclosed a very serious and widespread nuisance, seriously affecting bathing beaches and pleasure craft in the entire district. The causes were definitely traced to improper management and inadequate supervision of oil tankers which transport crude oil to and from New York, a trade which has developed to a remarkable extent during the past few years. The matter is under the jurisdiction of the federal authorities.

Division of Vital Statistics

Viewing the work of vital statistics registration in New York State during the year 1919 as compared with preceding years, it is clear that birth and death registration are not only practically complete but also that there has been a marked improvement in the accuracy and completeness of the information contained in the returns. The marriage records, however, leave much to be desired. The failure of many town, city, and county clerks to file these returns *promptly* as required by law, results in much delay in the preparation of the Department's annual statistics.

The chief scientific effort of the Division during the year was devoted to the preparation of the descriptive statistics of the influenza epidemic of 1918. Elaborate tabulations for this purpose have been nearly completed and preliminary graphs drawn for study. It is hoped that during the winter of 1920 this data can be assembled in suitable form for publication later.

Undoubted improvement has been noted in the general work of midwives subject to oversight by this Division. Their equipment, observance of the rules and regulations, and general cooperation with the local authorities and the State representatives has been better than ever before. The number of midwives in practice has increased but slightly, and several have been prohibited from practicing by the revocation of their licenses for cause.

REPORT OF PUBLIC HEALTH COUNCIL

REPORT OF PUBLIC HEALTH COUNCIL

During the year 1919 the Public Health Council devoted considerable time to an investigation of the desirability of the enactment of a chapter of the Sanitary Code regulating the production and distribution of food from a sanitary viewpoint. The result of this investigation led the Council to the conclusion that, in view of the economic conditions, the time was not ripe for such legislation, and action was therefore deferred on this subject.

Perhaps the most important work undertaken by the Council during the year was an investigation of the industrial welfare needs of the State. Through employees of the Department, designated for that purpose by the Commissioner at the request of the Council, and through the sanitary supervisors, the Council conducted a general survey of industrial conditions throughout the State and as a result thereof reported to the Commissioner its findings, reviewing the industrial conditions found and the causes underlying the same, and recommended the establishment within the Department of Health of a Division of Industrial Welfare.

The Council also passed upon a number of applications from health officers and midwives for exemption from established qualifications.

The Council further provided a period of isolation for typhoid and para-typhoid fever; for the exclusion from schools of children suffering with epidemic influenza; for the regular attendance of a physician at all day nurseries in the State; and for the taking of smears in cases of ophthalmia neonatorum.

A bill having been introduced in Congress by Senator Myers prohibiting the use of dogs in cases of animal experimentation, the Council passed a resolution of protest against the enactment of such legislation and sent copies to all the members of the United States Senate Committee on Judiciary, to which committee the bill was committed, and also sent copies to the two United States Senators from New York. To date the bill has not been enacted into law.

Under the provisions of chapter 264 of the Laws of 1918, which added sections 343-m to 343-t, inclusive, to the Public Health Law in reference to the control of venereal diseases, the Council adopted model regulations for the observation and for the duration of treatment of cases of syphilis, gonorrhea and chancroid, which it recommended for adoption by the various municipalities under the provisions of section 343-o. It also adopted rules for the collection of specimens in cases of such diseases, as required by the Sanitary Code.

In addition the Council passed upon many matters of less general importance which were brought to its attention.

Respectfully submitted,
HERMANN M. BIGGS,
ELLA L. BLAIR,
SIMON FLEXNER,
HENRY N. OGDEN,
T. MITCHELL PRUDDEN,
JACOB GOLDBERG.

February 18, 1920.

JOSEPH A. WARREN, *Secretary.*

DIVISION OF COMMUNICABLE DISEASES

DIVISION OF COMMUNICABLE DISEASES

HERMANN M. BIGGS, M.D., *Commissioner of Health, Albany, N. Y.:*

SIR.— I have the honor to submit herewith the following report for the Division of Communicable Diseases for the year 1919.

Respectfully submitted

F. M. MEADER

Director

During the year there were reported 228,208 cases of communicable diseases. Of this number 103,194 were from New York City and the remainder, 125,014 from the counties exclusive of New York City. The following table indicates the total number of cases reported in this State during the past five years:

	1915	1916	1917	1918	1919
New York City..........	109,037	94,353	92,370	252,740	103,194
Up-state...............	70,562	96,008	95,745	501,926	125,014
Total State.........	179,599	190,361	188,115	754,666	228,208

It is of interest to note the cases and deaths from the more important communicable diseases together with the rates per 100,000 people for a period of years. The table as prepared gives this information for New York City, up-state and the whole State since 1908. It was in 1908 that records of the State were first tabulated. (See Table 1, page 84.)

Notable among the improvements shown by this table are the rapid decrease in typhoid fever from 8,536 cases in 1910 to 2,551 in 1919; in tuberculosis from 37,963 cases in 1910 to 25,482 in 1919; and in scarlet fever from 31,504 in 1910 to 12,075 in 1919.

It should be noted that the number of cases of diphtheria has considerably increased in New York State during the year. In 1908, 20,759 cases were reported in the State, while during 1919 there were 25,077 cases. Other changes in the table will be noted including the reporting of pneumonia, syphilis and gonorrhea, which were not reported during earlier years.

A review of the State as a whole is of interest when comparison is made of the number of cases per month over a period of a number of years in order to note the usual prevalence. Table 2, page 88 presents a table showing the number of the more important communicable diseases as reported in up-state, New York City and total State by months since 1908. In previous annual reports these figures have been tabulated graphically. This year it was not deemed necessary to duplicate these graphs, hence the simple tables only are presented. It will be noted that measles and scarlet fever attain a maximum number of reports during the late winter and early spring. This is a contrast with the findings in England, where a maximum number of cases of these diseases is to be found in the fall. The explanation for this difference is not apparent.

Distribution of Cases by Counties

It is of further interest to note the counties of the State in which the more important communicable diseases were prevalent during the year. Table 3, page 90, shows the case rates and death rates by counties. From this table it will be seen that the case rate per 100,000 people for typhoid fever was particularly high in Cattaraugus, Erie, Niagara, Saratoga, Schoharie and Suffolk counties. It should also be noted that only 5 cases were reported from Essex county, 4 cases each from Putnam and Schuyler and 1 case from Yates, during the year. Further details regarding some of the larger outbreaks will be given later in this report. Tuberculosis was reported in considerable numbers in several of the counties. A special report by the Bureau of Tuberculosis is rendered elsewhere. These tables further show that whooping cough was most prevalent in Chemung, Dutchess, Seneca, Steuben and Ulster counties. The highest case rates for scarlet fever were in Cayuga, Chenango, Cortland, Seneca and Tompkins counties. The rate for the State as a whole was 153 per 100,000 people.

The disease which was most prevalent with the exception of measles was diphtheria with a general case rate of 226 per 100,000 persons. The table above referred to indicates that the highest case rate was in Cattaraugus, Chautauqua, Erie, Monroe, Montgomery, Rockland, Tioga, Ulster and Westchester counties.

Measles was most prevalent in Allegany, Columbia, Fulton, Monroe, Montgomery, Niagara, Seneca, Warren and Yates counties.

Two of the most important of the communicable diseases are lobar and bronchopneumonia. The former had a case rate, exclusive of New York City, of 77 per 100,000 people and the latter 49 per 100,000 people. Lobar pneumonia was most prevalent in Albany, Broome, Lewis and Seneca counties while bronchopneumonia was most prevalent in Allegany and Seneca counties.

Distribution of Cases by Municipalities

The report of the Division of Vital Statistics contains a table showing the cases and deaths by each municipality of the State together with the population of the same for the year 1915. Only a note is made of this table as the information contained therein is of special value to the municipalities concerned. We shall, therefore, limit the report to a description of special outbreaks, which have been studied in these municipalities by various members of the staff.

Typhoid fever at Tonawanda

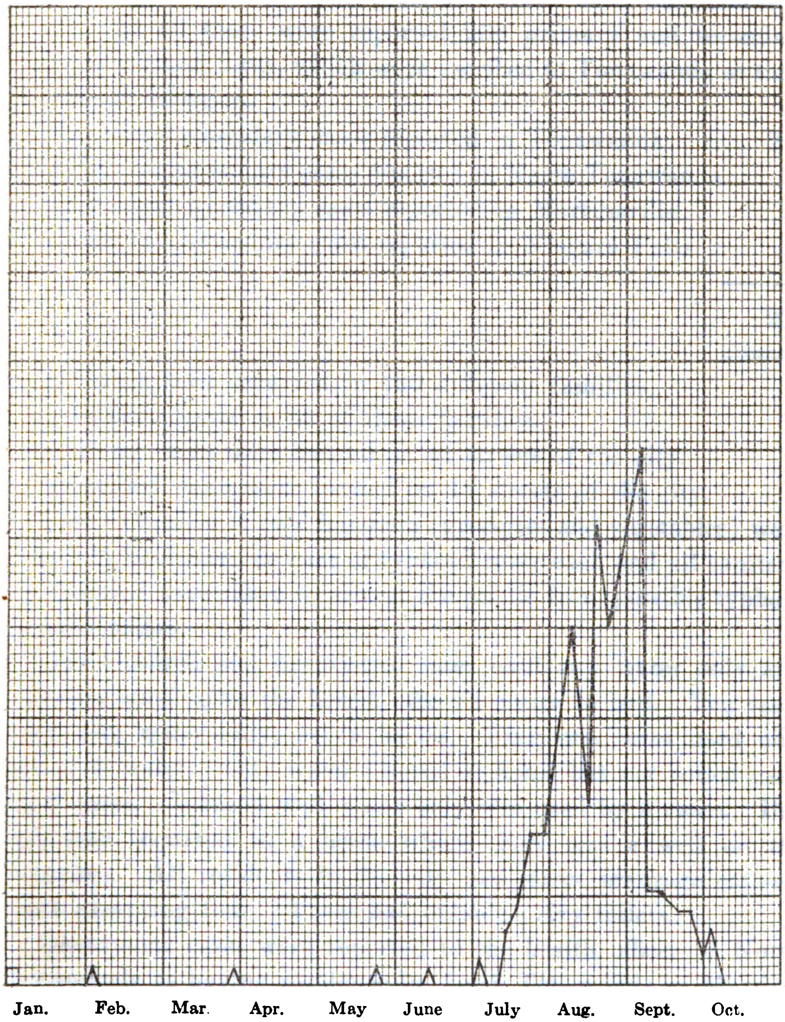
An outbreak of typhoid fever occurring during July, August and September, 1919, in the city of Tonawanda, Erie county, investigated by Dr. Herman F. Senftner, epidemiologist of the State Department of Health, was found to be due to the use of untreated river (Niagara) water owing to a break in the pipe line, which allowed the water to be drawn directly from the river bottom, without passing through the intake chamber.

Just previous to the discovery of this break a new pipe from a pumping station in Tonawanda to the intake pier in the river had been installed. This work necessitated the taking up of some of the sections of the old line in order that the new main might be laid in the trench occupied by the old one. The break was discovered in the line in the old trench some 350 feet from the intake pier towards the Tonawanda shore. The exact date of the occurrence of the break is uncertain but it is believed to have occurred some time between the middle of June and the 4th of July. Upon the discovery of the break in the intake pipe line July 8, 1919, Dr. John A. Harris, health officer of Tonawanda, immediately warned the inhabitants of the city through the local press and by the distribution of hand bills to the homes of the people that the drinking water was badly contaminated and should be boiled before use. Steps were taken to install a chlorinating plant at the pumping station, which was completed on August 11. The total pumpage at that time was approximately five million gallons. Twenty-four pounds of chlorin were used per day.

The intake reconstruction was finished on August 23 and water was taken for public consumption on this date. On August 30 Mr. F. E. Chase, chief engineer of the Tonawanda waterworks reported that all was not well with the new water supply. On October 3 a diver was sent down in the river to investigate and a break of some size in the intake pipe was discovered. A sleeve was put on at the point of the break and the work completed on the evening of October 6. On October 9 the Chief Engineer of Tonawanda waterworks reported that another (the third) break had been discovered about 300 feet from the intake pier. This was remedied at once.

From time to time samples of Tonawanda city water, raw Niagara river water, treated Niagara river water and Johnson well water were secured by the State Sanitary Engineering Division and analyzed by the Division of Laboratories, State Department of Health. The Johnson well water came under suspicion on September 5 owing to its proximity to possible contaminating sources and to the fact that a number of cases of typhoid ascribed to this well had been reported. A later report by the State Department of Health on the analysis of this well water with the recommendation that the well be permanently closed fully justified the early suspicions. The well was temporarily sealed on September 5 and permanently later. There were about forty wells in active use in Tonawanda during the epidemic and in only one instance was a well found to be located on the home

TYPHOID AT TONAWANDA, JANUARY 1, 1919 TO OCTOBER 5, 1919.



premises of a typhoid case, and in this instance the patient claims to have drunk only city water unboiled. Neighbors who drank of this well water did not come down with typhoid.

The epidemic began apparently on July 5, 1919, and probably ended with the last reported case, which had onset on October 4, 1919. In all there were reported 236 primary and secondary cases of typhoid fever, which were ascribed to Tonawanda as their source of infection.

Primary and secondary cases reported in Tonawanda....	214
Primary and secondary cases reported in North Tonawanda	16
Primary and secondary cases reported in Martinsville...	5
Primary and secondary cases reported in Niagara Falls..	1
	236

Primary cases occurred in 160 different families.

Secondary cases in 23 of these families.

Primary cases were located on 44 streets of the city.

Secondary cases were located on 18 streets of the city.

Three families of food handlers (groceries and vegetables) were found to have had one case of typhoid fever each and all sanitary precautions were taken to protect the public from possible typhoid contamination.

One hundred and twenty-two cases used city water only and unboiled until after the health officer's notice to boil. Ten cases used city water only, never boiled. Sixty-one cases used city and well water. City water filtered at home but not boiled used by 6 cases. Johnson well water only was used by 3 cases. But one case occurred in a home where there was a well on the premises. All residents in the city had street sewerage connections excepting four. These had outside privy toilets.

Twenty-one cases were reported to the health officer of North Tonawanda as having residence in North Tonawanda or Martinsville but referred to Tonawanda as a source of their infection. Of these, five were secondary cases, who had either worked or visited in Tonawanda and had used the Tonawanda water supply for drinking purposes. One case reported at Niagara Falls was referred back to Tonawanda as its source of infection.

During the typhoid epidemic a somewhat large incidence of the disease among the employees of the Tonawanda Board and Paper Company was noted. No other industrial plant in the city showed more than one or two cases among their employees. The Wilson Lumber and Box Company which is located close by the Tonawanda Board and Paper Company had a total of reported primary cases among its employees of only five, while among the employees of the Tonawanda Board and Paper Company the primary incidence was 15. Furthermore, the latter company had first opened its plant on or about August 15, 1919, while the former company had been in operation more than a year before and during the entire period of the epidemic.

Upon investigation of the drinking water supply of the Tonawanda Board and Paper Company, it was found that much raw Niagara river water was used by its employees. Three supplies of water were accessible to its employees: (1) National bottled water; (2) cooled city water served through bubble fountains; (3) raw Niagara river water derived from taps and other devices but intended for industrial purposes only. The use of common drinking receptacles was noted.

The Wilson Lumber and Box Company provided cooled city water through bubble fountains and the employees of both of these companies had, after the newspaper report of the intake break, resorted to the use of the Johnson well water. All the cases occurring among the employees of the Tonawanda Board and Paper Company admitted drinking the raw Niagara river water.

No typhoid infection, however, could be traced directly to the Johnson well water, although the analysis of this water showed that it was polluted, and the well was sealed on September 5.

Eleven deaths from typhoid fever occurred in Tonawanda from July 16 to October 10, 1919. Seven deaths due to the Tonawanda typhoid infection not included in this, since they occurred outside of Tonawanda, making a total of eighteen deaths in this outbreak.

Investigation showed that the cases of typhoid fever were very generally distributed among the inhabitants of the city; that there were in all 236 cases of typhoid fever reported to the health officer of Tonawanda and that the source of infection was undoubtedly due to drinking of the city water supply, which had been contaminated by sewage.

Typhoid fever at Shortsville

An outbreak of typhoid fever investigated by Dr. Herman F. Senftner, epidemiologist of the State Department of Health, occurred in Shortsville, Ontario county, an incorporated village of about 1,500 inhabitants in the months of September and October, 1919, with a total of nine cases with one dealth.

The outbreak was sudden in its onset and brief in its duration extending from the 17th of September to the 5th of October. The analysis of the village water supply by the State Department of Health together with the sudden onset and brief duration of the epidemic would seem to rule out the water supply as the source of infection.

The milk supply for the village was delivered by a single dealer who had no cows of his own but received his milk from two farms, each of which was delivered separately to his customers and as received from the farms. The milk from the A farm which consisted of the total morning and night production he delivered first in the morning, then returning to his home he received the milk which had been delivered in the meantime from the B farm and beginning at the point in the village where he had left off from the distribution of the A milk he began to distribute the B milk. All of the cases occurring on the route of the dealer were those who were served with milk from the B farm.

No history of typhoid infection at any time in their lives could be found in the persons employed upon the A farm.

The milking on the B farm had been done by the proprietor and a young boy, both of whom gave a negative history as to typhoid incidents in their lifetime but from August 25 to September 19 a Mr. X was employed as a hired man on the B farm. He admitted that some thirty years ago he had had typhoid fever. At the time of his employment on the farm he assisted in the milking. The first case of typhoid reported was that of the daughter of the proprietor of the B farm. This child drank freely of the B farm milk. Investigation showed that the date of onset of her illness was September 23 but an investigation of the temperature chart of her case when she was admitted to the hospital at Canandaigua, N. Y., seems indicative of the third week of typhoid fever. If this is true, the date of onset in her case would have been about September 17.

It is reported that the wife of the proprietor of the B farm nursed the child at the farm house before it was taken to the hospital and that milk pails and other utensils were cleaned in the house by the proprietor's wife who also attended the child in an adjoining room on the ground floor during the day time. This woman showed a negative history as to typhoid during her lifetime.

The absence of typhoid in the village prior to the advent of the hired man, Mr. X, on the B farm as a milker, the sudden onset of typhoid incidence after his leaving the farm and especially since he gives a definite history of having had typhoid at one time in his life would point to this epidemic as a "milk-borne" one infected by a typhoid carrier.

The examination of the stools of Mr. X, the milker, showed the presence of typhoid organisms.

Typhoid Fever at Port Jefferson

An outbreak of typhoid fever occurring during September and October, 1919, in Port Jefferson, Setauket and East Setauket, Long Island, investigated by Dr. Herman F. Senftner, epidemiologist of the State Department of Health, was found to be in all probability a "milk-borne" epidemic, due to the infection of the milk supply by a typhoid carrier.

Port Jefferson is an unincorporated village of about 2,500 inhabitants and is located in a basin at the south end of Port Jefferson harbor, an arm of Long Island Sound. Setauket is an old straggling settlement of about 1,500 inhabitants just west of Port Jefferson. The water supply of Port Jefferson is from a public source and an analysis of samples taken on October 9 proved the water to be practically free from colon bacilli and to have an extremely low total bacterial count. The water supply in Setauket is partly from individual wells and partly from rain water cisterns. The sewage disposal of Port Jefferson is by surface drains, which empty on salt meadows. The meadows are flooded by high tides and sewage is carried over a wide area. The sewage disposal of the people living on the side of the hills is by means of cesspools and privies.

The first condition that came to mind as an element in causing the outbreak was the surface disposal of sewage in the lower part of Port Jefferson. The State Department of Health had made a complete survey of the sewage conditions in August, 1917, and as a result had made specific recommendations to the town board of health which were not carried out. The construction of a sewerage system was well under way but was not at this time in use. The pollution of the soil and water in the lower part of the village with fresh fecal matter was even greater now than in 1917. The conditions seemed favorable to the spread of typhoid germs if infection of the sewage should occur.

The incidence of the cases of typhoid fever may be divided into three groups:

Group I. Consisted of about one dozen cases in the bungalow colony of summer residents, who lived in a collection of small cottages on the west side of Port Jefferson harbor, isolated from both Port Jefferson and Setauket. These cases developed after the families had returned to their homes and were not known to the investigator on September 29 when the first local case was reported. The cases in this group all received their milk supply from the same dairy.

Group II. Consisted of seven cases in Setauket.

Group III. Consisted of the cases which came down in Port Jefferson village.

It was at first thought that no specific relation of these (typhoid) cases was to be found and that the infection was in some way connected with the general exposure to raw sewage in the lower part of the village.

Number of primary cases	20
Number of secondary cases	7
Number primary doubtful cases	2
Total	29

Upon investigation of the milk supply of these cases it was found that twenty-one of them obtained their milk from one and the same source; three others each from a separate source and five from sources unknown. This one peddler who was also a producer had an undue preponderance of cases along his route and his own daughter developed typhoid on September 17. From this evidence it would seem that the cases of typhoid under the three groups point to the same source of infection.

It was found that in many of the families infected only the milk drinkers became ill. The others did not. The milk dealer whose route showed the greatest number of cases also supplied milk to a restaurant and a lunch cart in Port Jefferson.

In an interview with the milk dealer (Mr. X) and his farm hand the following facts were ascertained:

That the milking on the X farm was done by Mr. X and his farm hand; that the farm hand was first employed on the X farm in April of 1919, having left his former employer in whose employ he had been for seven and one-half years, but his labors there had been confined to farm work and he had never done any milking. The farm hand would furnish no information as to whether he had ever had typhoid fever but it was learned from his daughter that her father had had typhoid at some earlier period in his life, but she could not be definite as to dates.

In view of the preponderance of cases having had milk from the X dairy within the incubation period preceding the onset of typhoid, the statement by Mr. X that all such families had been sold milk by him during that incubation period or may have obtained it from the lunch cart or restaurant both of which were supplied milk by him and the incidence of typhoid fever among only such members of the bungalow colony who had drunk of the milk sold in the colony by him, it would seem that the source of infection was to be found at the X farm in the person of some typhoid carrier who had handled the milk supply sold from that dairy during August and September. Furthermore, in view of the onset dates which show that the epidemic was of an explosive type and its duration brief, this would tend to indicate that in all likelihood the epidemic was milkborne.

Later, some three or four examinations of the stools of the farm hand were found to be negative for typhoid bacilli.

During the year a special study of the sources of typhoid fever was carried on at the Gowanda State Hospital, Collins, New York. A number of typhoid carriers were discovered. This work is a continuation of an investigation started several years ago and has been of great value in preventing the spread of typhoid fever at this institution.

The following is the report of a small outbreak of typhoid fever at Hyndsville by Dr. Edward S. Godfrey. A typhoid carrier was subsequently discovered as the source of infection in this instance:

Typhoid Fever at Hyndsville

On July 5 an investigation was made of the typhoid fever cases in the Town of Seward, Schoharie County, in company with Dr. M. K. Engell. The homes of seven cases were visited. One of these was considered a doubtful case and a specimen of his blood was taken for a Widal examination.

The first case of this series, age 14, was taken sick, on May 30 with what was first supposed to be simple tonsilitis. He took to his bed with definite typhoid symptoms on June 2. The dates of onset of the remaining cases were June 6, 8, 14, 17, 22 and June 15. All of these cases, with the exception of the last named, had attended a school picnic given on May 24 by the teacher of the Jamesville District school at the farm of Mr. X. The picnic was attended by 41 persons, one of whom was an infant.

The following articles of food were contributed by various people who attended the picnic, the name of the donator following the item:

Potato salad	Mrs. X.
Lemon ice cream	Mrs. X.
Vanilla ice cream	Mrs. Y.
Peanut butter sandwiches	Not known.
Egg sandwiches	A. & B.
Dried beef sandwiches	Not known.
Cold baked beans	Mrs. C.
Chocolate cake	Mrs. D.
Cocoanut cake	Mrs. E.
Plain cake	Mrs. F.
Pickles	Mrs. G.
Lemon juice for lemonade	Mrs. C.

Mrs. X. and Mrs. Y. each furnished six quarts of ice cream.

Every one of the persons questioned admitted having eaten of all of the items mentioned with the exception of one or two who had not eaten the peanut butter sandwiches. Mrs. D. denied eating the peanut butter or the beef sandwiches. The beef as nearly as could be determined was dried beef.

The water used in making the lemonade was that from the X place, which has been occupied by the present family for thirty years and no case of typhoid fever has occurred on this farm according to Dr. Engell and Mrs. X to the best of their knowledge. In fact no typhoid fever cases have occurred in the Town of Seward according to Dr. Engell for a dozen years or more.

Nearly all of the people who contributed food to the picnic have been residents of the locality for some years with the exception of the Mrs. Y who furnished the vanilla ice cream. The Y's came to Seward, as was learned later, a year ago last April.

The distinction between the lemon and vanilla ice creams was not as well marked as had been hoped and it was learned later from Mrs. X that her supply of lemon extract running low, she had added a quantity of vanilla for flavoring. Most of the people questioned insisted that there was but one variety of ice cream although they knew there were two different freezers and that they were made at different places. They were unable to distinguish the Y from the X ice cream. This seemed to be of minor importance as practically all of them were served with both kinds at each helping.

All of those taken sick admitted having eaten abundantly of the ice cream and three of the six cases were among those who ate two or three quarts which remained after the party had been served. This seemed the most promising clue and while everything seemed to point to the Y ice cream as the probable source of infection, Mrs. X was visited at her home and was unable to give any information pointing to typhoid fever in herself or her family even in the remote past.

Mrs. Y was visited and it was found that she gave the following history. They removed to Seward from Cobleskill in April, 1918. They gave no significant history of typhoid occurring in either their family or among their intimates during their residence in Cobleskill. However, Mrs. Y stated that her two brothers had had typhoid fever seventeen years ago while she was a member of the family, and helping with the house work, et cetera; that her husband had typhoid 10 years ago, some four or five years after her marriage; and that her nephew had typhoid 6 years ago while he was a member of her household. She stated that she was the youngest of a very large family and was unable to give the history of typhoid in her other brothers or sisters or her parents. They may have had typhoid fever before she could remember, but she could not state this positively. She has never had typhoid herself so far as she knows and never had any trouble of the gastrointestinal tract. She denied similar symptoms in her husband or other members of her family.

Despite this negative history, the occurrence of these typhoid cases in her family seemed extremely significant. A specimen was taken for a Widal and Dr. Engell was told that we would desire specimens of stools from her and from her husband.

Her method of making the ice cream was by boiling part of the milk and sugar, adding eggs and corn starch while on the stove, cooling the mixture with the balance of the milk, adding the flavoring extract and freezing immediately. She stated that 20 minutes after the mixture was taken off the stove it was frozen ice cream. Mrs. X on the other hand stated that she had boiled all the materials in her ice cream and had not added anything except the flavoring extract after it was taken from the stove.

The June 15th case, living in a small group of houses in a place called Dorloo, appeared to be entirely distinct from the other six cases mentioned, and no satisfactory clue to the source of infection was discovered. None of the food from the picnic had reached this family nor had they had any intercourse with any of the sick people in the town. They live in a different school district and are remote from the other cases. Their milk supply was not obtained from any of the families on which typhoid existed.

In all cases proper instructions had been given in regard to the disposal of the excreta. In most cases the wells were properly located relative to the privy. As a rule, however, the privies were in need of more effective measures in regard to the ingress and egress of flies.

All of the cases, with two exceptions, seemed to be quite severe, the early cases showing considerable emaciation and the more recent one continuing to have high fever.

Subsequent examination of the stools of Mrs. Y by the State Laboratory showed them to be negative, while those of Mr. Y proved positive. Mr. Y was apparently the source of infection.

Special Investigation Regarding the Sources of Infection of Typhoid Fever

In view of the fact that the number of cases of typhoid fever occurring in various counties is so small and yet does occur, the source of which cannot be traced to infected water or milk supply, it has been deemed wise to conduct special investigation on the sources of these sporadic cases in some of the various counties in order that the real sources of infection may be discovered and checked. For this purpose, Dr. Herman F. Senftner has made a special investigation in Allegany, Cattaraugus, Chautauqua, Erie, Livingston and Niagara counties, and Dr. F. W. Laidlaw, sanitary supervisor for Delaware, Orange, Sullivan and Ulster counties has made a special study of the sources of infection in his district. Dr. Laidlaw has been assisted by Miss Elizabeth Rennert in this investigation. This work has been very useful as sources of infection which had previously been unsuspected have been discovered, and furthermore it has shown that many people do not realize that a case of typhoid fever may be a source of infection and are very careless in regard to contact with these patients and their excreta.

Typhoid Carriers

During the year the Department has had under supervision 57 typhoid carriers in New York State and in the city of New York 67 cases have been found and kept under supervision. The following are the rules and regulations which have been adopted by the State Department of Health for the supervision of these cases:

Typhoid Carriers

The persistence of typhoid bacilli in the intestinal discharges and urine of persons recently recovered from typhoid fever is not unusual and does not necessarily denote a carrier state. Only in those cases in which the organisms do not disappear from the discharges after twelve weeks may a chronic carrier condition be said to exist. The number of chronic carriers is not accurately known but is greater than usually supposed.

The carrier state not only follows recognized cases of typhoid fever but may result from those which, because of the unusual mildness of the symptoms, have not been recognized as typhoid. In a small percentage of cases no history of the occurrence of typhoid fever is obtainable. In this way nurses attending typhoid fever have become carriers. Chronic carriers may continue to discharge the bacilli for many years.

The elimination of typhoid bacilli from the intestinal and urinary tract is intermittent, rather than constant. The bacilli enter the intestine usually from the gall bladder and gall ducts, the seat of typhoidal inflammation. When a typhoid cystitis exists, the organisms appear in the urine. A rarer condition resulting in the discharge of typhoid bacilli is post-typhoidal suppuration of bones, commonly at the junction of cartilaginous and osseous tissues and most often about the ribs, leading to the formation of discharging sinuses which may persist for long periods.

The treatment of typhoid carriers is perplexing and often unsatisfactory, and no treatment applicable to all cases has been discovered. Infection of the urinary bladder can frequently be suppressed by the administration of hexamethylamin. Dischaging sinuses may be cured by appropriate surgical treatment. When the gall bladder alone is infected, surgical drainage or extirpation removes the source of intestinal contamination. But when the infection exists in the biliary ducts within the liver, the condition can not be reached by surgical methods, and no reliable therapeutic measures for its suppression are known at the present time.

Specimens of excreta to be forwarded to the State Laboratory for examination should be placed in the special containers provided for this purpose. Use the sterile swab enclosed in the tube for collecting the specimen, placing enough material upon the swab to avoid drying in transit. Every effort should be made to reduce delay in transmitting specimens to the laboratory to a minimum. Typhoid bacilli present in intestinal discharges diminish in number rapidly, a delay of 24 hours meaning, on the average, a loss of ten per cent in the number of organisms present.

Many important outbreaks of typhoid fever have been traced to carriers engaged in handling milk or other foods consumed by others. In two well-known instances domestics employed in one family after another have been responsible for the occurrence of cases in practically every family in which they have been employed.

A person of intelligence who is a carrier of typhoid bacilli, but who is willing to observe strictly certain essential precautions, may live and mingle with others and still need not be a source of danger to those about him. In formulating rules and regulations to be observed by carriers, the State Department of Health endeavors to restrict the activities of such persons to the smallest degree consistent with the protection of public health. By observing the following rules strictly, the carrier will not only avoid becoming a source of danger to those about him, but will be rendering a public service:

RULES AND REGULATIONS FOR CONTROL OF TYPHOID CARRIERS

1 A typhoid carrier is a person who harbors typhoid bacilli and emits them, regularly or intermittently. This condition may or may not follow a recognized attack of typhoid fever. A person continuing to discharge typhoid bacilli following an attack of typhoid fever, shall be regarded as a case, rather than a carrier, for a period of at least twelve weeks following subsidence of clinical symptoms. After that period, the Health Officer may, in his discretion, declare such person to be a carrier.

2 The Health Officer, upon the discovery of a typhoid carrier, shall immediately report the fact to the State Department of Health, giving the full name, age, occupation, and address of such carrier (together with any other information relative to possible or probable infection of others), and shall also communicate the fact to the carrier himself or his guardian, imparting to him detailed information regarding the precautions to be observed in disposing of his discharges, in preventing contamination of his hands, and thus protecting others from infection. Instruction given by the Health Officer should include a copy of these rules and regulations and directions to wash the hands thoroughly with soap and water immediately after using the toilet and to use individual towels and drinking and eating utensils, which should be thoroughly cleansed, preferably by boiling, before being used by others.

3 When an outside toilet is used regularly by a typhoid carrier, it shall be equipped with a watertight container so screened as to exclude flies, and the removal of the contents for disposal should be in accordance with instructions given by the Health Officer.

4 No typhoid carrier may engage in any occupation involving the handling of milk or other food products to be consumed by others. Should a typhoid carrier be discovered upon a dairy farm, the Health Officer may prohibit the sale of milk, cream, or butter, except under conditions stated in regulation 37, Chapter II, of the Sanitary Code.

5 No typhoid carrier shall permanently leave the community in which he resides without notification to the Health Officer, who is to be informed of his destination, including his new

address. The Health Officer should immediately notify the State Department of Health of the change of address.

6 The local Health Officer shall visit each typhoid carrier within his jurisdiction at least once monthly in order to determine whether instructions are being complied with; and once in each quarter shall render a report regarding each such carrier to the State Department of Health upon a form prescribed for the purpose.

7 The Health Officer shall cause samples of the discharge from each carrier to be examined bacteriologically at intervals at a laboratory approved by the State Department of Health, and a carrier may be regarded as recovered and be discharged from observation when four successive samples, taken not less than seven days apart, shall have been found not to contain typhoid bacilli; except that no negative report shall be considered if the specimen has been delayed in transit and in no instance if more than two days have elapsed between the collection of the specimen and its examination.

About $1,000 has been distributed to carriers who have been deprived of an income and are unable to care for themselves by reason of the limitations imposed upon them because they are typhoid carriers.

Smallpox

The following summary of outbreaks of smallpox in this State was prepared by Dr. Wm. B. May and is as follows:

One hundred seventy-three cases of smallpox of a mild character were reported in the State in 1919. Several foci of infection were located; in some instances the source of the disease was not discovered. The possibility of erroneous diagnosis, causing smallpox to be diagnosed as chickenpox and therefore not fully quarantined has been shown in several instances this year in different sections of the State.

The vital statistics of this State show three deaths in 1916; four deaths in 1917; one in 1918 from smallpox but we find that the foreign reports show a virulent character of the disease. Brazil reports seventy cases with twenty-one deaths during December and January. India and Indo-China appear to have a very virulent form of the disease, the same being true of Spain. Bombay, India, reports two hundred cases with one hundred four deaths, or over 50 per cent mortality in the cases from December 20, 1918 to May 8, 1919, while we find in Calcutta there were one hundred seventy deaths for the period from December 20, 1918 to March 8, 1919.

The first cases reported during the year 1919 in this State occurred in Erie and Oswego counties, widely separated territories, nor has it been possible to connect the outbreaks. The Oswego smallpox seems to have been introduced into that county by a visitor from Oneida but we have no information as to how the patient in Erie county contracted the disease. The beginning of the outbreak in the two counties occurred at the same time but, as stated before, there appears to be no connection between the two outbreaks.

The record of cases reported during 1919 shows that the youngest patient was 3 months and the oldest 68 years. In some of the outbreaks, the disease appeared almost entirely among adults, while in an outbreak a few miles distant it was confined to children, causing a diagnosis of chickenpox to be made, thereby giving fresh foothold to the disease. A reference to the table given demonstrates the fact that smallpox attacks the unvaccinated in as much as we find in the 173 reported cases that 113 were never successfully vaccinated, 10 were vaccinated within seven years, 13 were vaccinated more than seven years ago. In 37 cases the vaccination history was not obtained. At this point, it may be well to mention the fact that in one of our cities, owing to the spread of smallpox among the negro population, the health authorities with the aid of the police examined 1,000 negroes, finding among them, 177 unvaccinated and it is probable that a similar survey of the white population, especially in rural districts, would show an even larger percentage of unvaccinated persons.

As usual most of the outbreaks have gained headway because the cases have been mistaken for chickenpox.

During the month of April, a case of smallpox was discovered at Schenevus, some eight miles distant from Westford and on investigation, several cases of the disease were found among the employees at a saw mill. This outbreak was happily confined to the men employed and their immediate families, and all of those affected were unvaccinated adults. The outbreak at Westford, a few miles distant, occurred about two months later and was confined entirely to children. The first case at Westford appeared in a child, aged nine years and no source of the infection was at first apparent. Investigation revealed the fact that one of the Schenevus patients, released from quarantine May 22, 1919, obtained employment on a farm in the town of Westford on May 24, 1919. On June 6, 1919 the patient, mentioned above, who resided on the adjoining farm, the houses being about 600 feet apart, was taken sick with an eruptive disease, diagnosed as chickenpox. This was followed by several cases, which have proved to be smallpox, both in the town of Westford and the village of Worcester. All were clearly traceable to association with the case, which began on June 6.

It may be somewhat farfetched to attribute the source of this infection to the Schenevus case. However, the fact that he was released from quarantine May 22 and two days later began work at the adjoining farm; that the children from the house of his employer and the children of the house in which the first case occurred at Westford, mingled together, makes it highly probable that he may have been in contact with the child. Again, it is possible that although released from quarantine and supposedly free from infection there may have been a few crusts remaining upon his body, possibly on the soles of his feet or even on the palms of his hands.

The cases at Long Island appeared to have been entirely confined to the crews of two vessels. They were originally diagnosed as chickenpox but investigation has enabled the health authorities to trace these infections to Nova Scotia, where a focus of smallpox existed.

The outbreak at Promised Land, Long Island, was marked by the extreme mildness of the cases and the fact that several diagnosticians were misled by the character of the eruption. The crew of the steamer Portland were coaling the vessel, when two men left the ship, although eruptions were on their faces, one examined at Jersey City Health Department was diagnosed as varicella, the other was taken to the Kingston Avenue Hospital and diagnosed as variola by the New York City health authorities. The steamer with its crew arrived the following day at Promised Land, where a third member of the crew was found with an eruption on his face and body, which was diagnosed as chickenpox but the precaution of isolating the case had been taken.

Several other cases were discovered on the steamer Adroit, all of which were confusing owing to the atypical eruption.

During the second month of the year, cases were reported from several localities, among them being Mechanicville and Binghamton, widely separated on the map but showing close relationship between the cases. Mr. X who was the first case in Mechanicville, remembered sitting near a man whose face was broken out on the train, as he journeyed from Binghamton to Mechanicville some two weeks before his illness. This man left the train somewhere near Oneonta, according to the statement of Mr. X. Smallpox was existent in Binghamton at this time and soon appeared in and about Oneonta.

Again in March, a new territory was invaded by smallpox, when Mrs. Y of Olean was found to be affected. Careful investigation of this case enabled the Sanitary Supervisor to trace the infection to St. Marys, Pa., where the disease had been introduced by one A. B. from Virginia, showing the possibilities of the disease being transmitted over long distances.

During November the disease made its appearance in Erie county, city of Buffalo, and was soon followed by the discovery of some peculiar "chickenpox" in Monroe and Columbia counties, which occurred among adults and proved on close examination to be smallpox. This led to increased vigilance on the part of the State Department of Health, especially as the disease appeared to be rampant in Canada. Though mild in character as a rule, it has resulted in several deaths.

Owing to the opposition to vaccination in Canada and the prevalence of the disease in that country, it was considered a wise precaution to require the vaccination or evidence of recent vaccination from all persons entering the United States from Canada, unless such persons were immune by virtue of having had smallpox.

Number vaccinated within seven years preceding attack, 10.

Number last vaccinated more than seven years preceding attack, 13.

Number never successfully vaccinated, 113.

Vaccination history unobtained or uncertain, 37.

During the fall, an outbreak of smallpox in Canada caused the U. S. Public Health Service to establish a quarantine which extended along the Canadian border of this State. People were not permitted to enter the State unless they would be vaccinated or showed signs of recent successful vaccination. This quarantine was established on November 21, 1919 (removed on March 19, 1920).

The following number of vaccinations against smallpox were performed in New York State, exclusive of New York City and also in New York City, making the total for the State as follows:

Up-state	19,721
New York City	82,543
Total State	102,264

The following number of communicable diseases were reported on dairy farms during the year:

COMMUNICABLE DISEASES REPORTED ON DAIRY FARMS

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Diphtheria	3	2	2	1	4	2	7	3	2	4	4	9	43
Scarlet fever	5	15	13	11	10	4	10	7	14	17	15	16	137
Typhoid fever	....	....	....	1	3	2	1	4	....	3	....	....	14
Diphtheria carrier	2	....	....	....	....	....	....	....	....	....	....	....	2
	10	17	15	13	17	8	18	14	16	24	19	25	196

The Department has issued several new circulars on communicable diseases, among them are a circular on pneumonia and a leaflet on influenza, copies of which follow:

Pneumonia

Pneumonia is a communicable disease characterized by a rapidly developing inflammation of the lungs. The inflammatory process is incited by bacteria, most often by one called the pneumococcus. Early in the disease large numbers of air cells, through which in health the blood is supplied with oxygen, become filled with solid or semi-solid material, so that air can no longer enter. The inflammation may extend to the pleura, the membrane covering the lungs, the result being a complicating pleurisy. The prominent symptoms — fever, labored breathing and pain — are due to the absorption of poisons given off by the bacteria, to the filling of the air cells and to friction between inflamed surfaces during the act of breathing.

Cases of pneumonia are classified according to the distribution of the inflammatory process in the lungs. To understand this it is necessary to know that each lung is divided by a folding inward of its pleural covering into two or three large sections called "lobes." These in turn are made up of small groups of air cells surrounding and opening into the smaller bronchial tubes and called "lobules." In lobar pneumonia an entire lobe or more than one is involved. When apparently robust people in middle life are suddenly stricken with pneumonia, it is usually of this type. In lobular or bronchial pneumonia the inflammatory process is scattered through the small lobules, with unaffected areas intervening. It is this type which occurs so frequently in infants and old people. The term "pleuro-pneumonia" is sometimes used to describe the condition existing when pneumonia is complicated, as it often is, by pleurisy. "Typhoid pneumonia" is a term no longer used but which was often encountered before the two distinct diseases — typhoid fever and pneumonia — were well understood.

Pneumococci are present in large numbers in the material coughed up by a patient suffering from pneumonia and if this infected material gains entrance through the mouth and nose to the lungs of another person, he too may develop pneumonia. Many persons, however, into whose mouths and noses pneumococci find their way, never contract the disease. A body in perfect health has the power of destroying the germs and resisting their poisons (toxins) unless they enter the body in overwhelmingly large numbers. Ordinarily it is only when the body's resisting power is reduced by some cause that it succumbs. Exposure to cold, overwork, loss of sleep or dissipation may temporarily lower vitality. Very often it is a neglected " common cold," which prepares the body for invasion. In fact the " cold " may be incited by the same germs which ultimately become responsible for the attack of pneumonia. The inflammation, beginning in the nose or throat, if neglected extends along the air passages until the bronchial tubes, and finally the lungs themselves, become involved.

Although many persons have pneumonia and recover, the disease is sufficiently serious so that every reasonable effort should be made to avoid it and to protect others. Anyone who neglects a severe cold is inviting an attack of pneumonia. While influenza was epidemic physicians everywhere observed that people suffering from severe colds or attacks of true influenza, who went to bed immediately and remained there until fully recovered, rarely developed pneumonia. A person suffering from a cold and going about as usual may be a greater source of danger to others than the pneumonia patient who is confined to his bed and coming in contact with no one except his attendants.

Pneumococci have been found to be of four classes or types, designated as Types I, II, III and IV, those of each type differing in certain respects from those of others. The State laboratory prepares and distributes under certain conditions a serum for the treatment of cases due to pneumococci of Type I. In order to determine what type of pneumococcus is present in any case it is necessary for the physician to send a specimen of sputum to a laboratory for examination.

The following suggestions are offered for the guidance of those who have duties to perform in connection with a case of pneumonia:

To the Nurse or Attendant

Keep the patient in a room apart from the rest of the family.

Boil all dishes, handkerchiefs, towels and washable bedding used by the patient before washing.

Catch discharges from the nose and throat of the patient upon pieces of cloth which can be burned.

Wash your hands with soap and water at once after caring for the patient.

To the Physician

Report the case to the health officer.

Advise the patient and attendants regarding the care of discharges.

Send a fresh specimen of sputum as soon as possible to an approved laboratory to have the type of organism determined.

If the laboratory examination indicates the presence of Type I pneumococcus, and if there is available a physician who has qualified for its administration, send to the nearest supply station for serum and administer with the least possible delay.

To the Health Officer

See that detailed instructions regarding care of discharges are given to the family and attendants of the patient.

Cooperate with the physician in sending specimens of sputum to a laboratory approved for the purpose.

If the laboratory report shows the presence of Type I pneumococcus and if the attending physician is not thoroughly familiar with the technique of administering pneumonia serum, advise him as to the nearest qualified physician. Assist him in securing serum.

Directions for the Collection of Sputum

Sputum coughed from the deeper air passages and not saliva should be sent for examination. When sputum can not be obtained, as so frequently happens with children, use a miscellaneous outfit with tube and swab to collect as much secretion as possible from the pharynx.

Collect the sputum in sputum jar outfits with miscellaneous (pink) examination blanks, which should be filled out carefully. The time of onset, location and extent of lesion, morning and evening temperatures and pulse rate should be given. The specimen should be sent to the laboratory without delay. Reports will be sent by telephone or by telegraph if the diagnosis is Type I.

Distribution of Antipneumococcus Serum

Serum for the treatment of Type I cases of pneumonia is distributed by the laboratory at Albany to various local centers which have been established for the diagnosis of pneumococcus types and new centers will be established as laboratory facilities are developed.

Epidemic Influenza

Epidemic influenza is a highly communicable disease caused by a very minute disease germ known as the influenza bacillus. The inciting organisms of the disease are present in enormous numbers in the discharges from the nose and throat of those ill with the disease, and the disease is spread by the transfer of these germs, directly or indirectly, to the nose or throat of others by coughing or sneezing, or by kissing on the mouth, or shaking hands, or the use of common towels, drinking cups, improperly cleansed eating and drinking utensils or other objects which are handled in common.

The epidemic now prevailing closely resembles that which occurred in 1889 — 1890 (then commonly known as the Russian grippe), and which spread throughout the entire world. The use of the term "Spanish" is unfortunate and has served to create the impression that a new and especially dreadful disease has appeared.

Epidemic influenza, while rarely of itself fatal, has a remarkable faculty of paving the way for the introduction of other secondary disease germs (especially pneumococci and streptococci) which in a certain proportion of cases produce bronchitis and pneumonia (very frequently of the bronchopneumonic type), pleurisy, and other serious complications. The death rate from the secondary pneumonias which occur may be roughly estimated at about 20 per cent. The majority of such secondary pneumonias occur in young adult life, between the ages of 15 and 35.

The Course of the Disease

The onset of typical cases is sudden and accompanied by a rapid rise of temperature varying from 102 degrees to 105 degrees and by severe pains throughout the body, especially in the head, back and extremities. There is usually more or less redness of the conjunctivae with watering eyes and a rather profuse nasal discharge. The throat may be practically normal or slightly or markedly reddened. The pulse in proportion to the temperature is characteristically slow in uncomplicated cases; when complications develop the pulse immediately increases in frequency. A cough is usually present due to tracheobronchitis and at first is dry, aggravating and without expectoration; it is apt to last for some days after the fall of the temperature. The acute symptoms usually last for three or four days, the temperature falling rather rapidly on the second to fourth day. Digestive symptoms, with vomiting and diarrhea, may usher in the disease or accompany the other symptoms. Relapses are not infrequent. The disease is often accompanied or followed by great prostration and the patient is left in a weakened condition, and convalescence is slow.

Atypical Cases

During an epidemic of influenza a very large number of persons suffer with what appear to be ordinary colds with slight fever and general malaise followed by a dry cough. Probably many of these are abortive cases of influenza, the patient being relatively resistant to the action of the organism. Such persons are apparently immune to the more severe attacks but are able to transmit the disease in severe form to others.

Susceptibility

There is reason to believe that an attack of influenza confers a more or less permanent and complete immunity on the individual affected. It is not possible to say at the present time how long such immunity lasts. Persons in the later periods of life seem to be relatively immune from the severer types of the disease, possibly because they were affected with the disease in the previous epidemic or subsequent to it.

Prevention

From what has been said of the causation and spread of influenza the means of control are obvious. Spitting in public places or on the sidewalk or on the floors of public buildings or conveyances is forbidden by the Sanitary Code of the State of New York and is a misdemeanor. The Public Health Council has recently passed a regulation making it also a misdemeanor to cough or sneeze without properly covering the nose and mouth. Unguarded coughing, sneezing or loud laughter are a much more ready means of spreading this and other communicable diseases of the respiratory tract than spitting. Local health officers should warn the people of their respective communities to this effect and should see that this new regulation is enforced.

Attendants on influenza cases, and other persons, after contact with them, should wash their hands thoroughly with soap and hot water. Physicians and nurses are advised to wear gauze masks over the nose and mouth when in attendance on these patients; these should be kept clean and removed and sterilized frequently. Persons suffering from influenza should be confined if possible to their own rooms, and other members of the family should not enter unless necessary, and then only with proper precautions observed. Handkerchiefs and towels should be properly disinfected, or better, cloths or paper napkins employed to receive the discharges and these should be burned. Dishes and eating utensils should be kept separate and should be boiled before being used by others.

When the disease appears in a community the local health officer should warn the people to avoid crowded places. Public funerals should be forbidden, not because of danger of infection from the remains, but because of the danger of infection from the people who assemble. So far as possible the windows of public conveyances should be kept open and regulations put into force to prevent traffic congestion. Generally it is advisable to close places of amusement, especially movies and theatres.

While theoretically it would be desirable to strictly quarantine every case of influenza, it is not possible to do so because of the difficulties in the diagnosis of the mild cases and the large number of cases which very rapidly develop in a community. Within the household, however, it is possible in many instances to effectively separate the sick from the well.

Treatment

At the present time it is not definitely known whether influenza vaccines are effective or not in the prevention of this disease. It is hoped that such vaccines properly prepared from killed influenza bacilli, inoculated in the same general way as is done in the case of vaccine for typhoid fever, may prove of value. The intervals between the inoculations, however, should be only two or three days instead of seven or more, as is the case in typhoid fever. It has been proven that these vaccines properly administered do not produce any considerable reaction. A number of solutions have been recommended for use in the throat and nose, but it is impossible to say whether they are of real service. There is no specific treatment for the disease.

The great essential for anyone who develops symptoms of influenza is to go to bed at once in a well ventilated room, with sufficient bed covering, and to remain there until the symptoms have disappeared. Certain coal tar products may be used under a physician's direction to alleviate the symptoms, especially the pain and headache. These remedies may have but little effect on the temperature and are often depressing and should not be used recklessly by the laity. The pulse is frequently weak during the attack and heart stimulants may be required. The bowels should be moved freely at the beginning of the disease and kept open subsequently. The diet should be confined to fluids during the course of the fever and plenty of water should be given. Patients within a household or hospital who develop signs of pneumonia or have especially aggravated sore throats should be immediately removed from contact with other influenza patients, as there is grave danger of complications spreading. The irritating and nagging cough will very frequently require the use of some sedative cough mixture. Creosote for bronchitis, when it has reached a subacute stage will prove of value.

Pneumonia

When this develops the physicians in attendance should make every effort to determine the type of pneumonia present by sending a specimen of fresh sputum in a clean bottle to the nearest laboratory equipped for making a differential diagnosis. The State Laboratory in Albany is prepared to take all specimens of this kind. If the laboratory reports that the pneumonia is of Type I, arrangements should be made immediately to administer the serum which may be obtained at the State Department of Health Laboratory.

Changes in Personnel

During the first half of the year, Dr. Paul B. Brooks was the Acting Director of the Division. On July 1, the Director returned from service in the Army and continued throughout the remainder of the year.

Dr. Herman F. Senftner has been assigned to perform epidemiological work in the western part of the State, with headquarters at Buffalo, New York.

Dr. Edward S. Godfrey was detailed to special work on investigation of industrial plants during most of the latter part of the year.

Sanitary Supervisors

The following is a list of sanitary supervisors with the districts to which they have been attached during the past year:

Dr. Halsey J. Ball, 1 Bemis street, Glens Falls, N. Y., Albany, Greene, Rensselaer, Schenectady, Schoharie and Saratoga, except cities Troy, Albany and Schenectady.

Dr. Edward Clark, 573 Ellicott square, Buffalo, N. Y., Erie, Niagara, Orleans and Genesee.

Dr. Joseph E. Clark, 20 Scott street, Utica, N. Y., Madison and Oneida.

Dr. John A. Conway, 5 Hakes avenue, Hornell, N. Y., Steuben, Schuyler, Tompkins, Chemung, Tioga and Broome.

Dr. C. R. Hervey, 158 W. Second street, Oswego, N. Y., Oswego, Jefferson and Wayne. Towns Sterling, Cato, Conquest, Victory and Ira in Cayuga.

Dr. F. W. Laidlaw, Hurleyville, N. Y., Delaware, Orange, Sullivan and Ulster.

Dr. J. J. Mahoney, 401 Lafayette street, Jamestown, N. Y., Allegany, Cattaraugus, Chautauqua and Wyoming.

Dr. P. H. Mason, 734 South street, Peekskill, N. Y., Columbia, Putnam, Dutchess and Westchester.

Dr. William L. Munson, Granville, N. Y., Clinton, Essex, Warren and Washington. Towns, Altamont, Santa Clara, Duane, Brighton, Franklin and Harrietstown in Franklin.

Dr. Frank Overton, Patchogue, N. Y., Rockland, Nassau and Suffolk.

Dr. S. W. Sayer, Gouverneur, N. Y., Lewis, St. Lawrence and Franklin, *except* towns, Altamont, Santa Clara, Duane, Brighton, Franklin and Harrietstown.

Dr. F. W. Sears, 305 Herald Bldg., Syracuse, N. Y., Chenango, Cortland, Onondaga, Seneca and Cayuga *except* towns, Sterling, Victory, Ira, Conquest and Cato.

Dr. B. R. Wakeman, 5 Hakes avenue, Hornell, N. Y., Livingston, Monroe, Ontario and Yates.

Dr. James S. Walton, 158 Guy Park avenue, Amsterdam, N. Y., Fulton, Hamilton, Herkimer, Montgomery and Otsego.

Dr. C. C. Duryee, 1716 Eastern Parkway, Schenectady, N. Y. Cities, Troy, Albany and Schenectady and special work on scoring of Health Activities and Health Officers' Course.

Several of the supervisors have carried out special work in addition to their regular duties. For example:

Dr. Halsey J. Ball has been engaged in the organization of tuberculosis clinics and has also undertaken special epidemiological work in various parts of the State.

Dr. Edward Clark has been engaged in lecture work relative to venereal diseases for a portion of his time.

Dr. John Conway has been in the service of the United States Army. He returned on August 1.

Dr. F. W. Laidlaw has made a special investigation of the sanitary conditions of the summer boarding houses in his district.

Dr. William Munson returned from military service September 1 and has organized a public health course for nurses in the Nurses' Training School at Plattsburg.

Dr. Frank Overton returned from military service in May. He also in cooperation with Dr. Denno has published a book entitled "The Health Officer," which has received much favorable comment.

Dr. F. W. Sears has organized and carried on courses for health officers in connection with the Medical Department of the Syracuse University, in addition to his other duties as Sanitary Supervisor.

Dr. B. R. Wakeman has organized a course in public health nursing for graduate nurses at the University of Rochester.

Dr. James S. Walton has done considerable work in districts adjacent to his on account of the illness or absence of the adjoining supervisor.

Dr. C. C. Duryee has carried on a very important work in connection with the scoring of the health activities of various cities of the State.

The duties of the Sanitary Supervisors in their districts are outlined very explicitly in the Public Health Law, to which reference should be made. In carrying out these duties they have been engaged in the investigation of numerous outbreaks of communicable diseases, which are mentioned on page 83.

The table shows that the Supervisors have carried out a very important work in connection with the control of communicable diseases in this State and the fact that the number of cases reported during the year has materially decreased indicates that the work which they have done has been very useful.

OUTBREAKS OF COMMUNICABLE DISEASES IN WHICH THE SANITARY SUPERVISORS WERE ENGAGED DURING THE YEAR 1919

SANITARY SUPERVISORS	Diphtheria	Typhoid fever	Scarlet fever	Poliomyelitis	Chickenpox	German measles	Tuberculosis	Encephalitis	Trachoma	Smallpox	Measles	Influenza	Cerebrospinal meningitis	Pneumonia	Dysentery	Whooping cough	Rabies	Anthrax	Trachoma	Mumps
Dr. Halsey J. Ball	8	2	12	1	7	1	2	1	1	....	....	....	....	....	....	....	....	....	....	....
Dr. Edward Clark	6	2	6	....	6	....	2	....	....	7	....	....	....	....	....	....	....	....	....	....
Dr. Joseph Clark	16	8	20	3	12	2	3	....	....	....	4	3	....	....	....	....	....	....	....	....
Dr. John Conway	2	2	2	5	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dr. C. C. Duryee*	1	2	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
Dr. C. R. Hervey	14	6	9	1	1	....	1	....	....	7	....	....	1	....	....	....	....	....	....	....
Dr. F. W. Laidlaw	17	6	7	1	2	....	1	....	....	1	....	4	....	2	1	1	....	....	....	....
Dr. J. J. Mahoney	41	4	17	....	5	....	3	....	....	4	6	2	....	....	....	2	2	1	....	....
Dr. P. H. Mason	13	4	5	2	7	....	....	....	....	1	1	3	4	....	....	....	....	....	1	....
Dr. William L. Munson	6	5	1	7	1	....	4	....	....	....	....	....	1	....	....	....	....	....	....	1
Dr. Frank Overton	8	8	3	....	1	....	1	....	....	4	....	3	....	....	1	....	....	....	3	....
Dr. S. W. Sayer	14	5	13	3	....	....	5	1	....	1	1	3	3	....	....	....	....	....	....	1
Dr. F. W. Sears	10	14	39	9	11	....	3	....	....	3	....	1	2	3	....	....	....	....	1	....
Dr. Herman F. Senftner†	6	4	7	....	7	....	....	....	....	2	....	....	1	....	....	1	....	....	....	....
Dr. B. R. Wakeman	3	4	3	....	5	....	3	....	....	6	....	....	1	....	....	....	....	....	....	1
Dr. James S. Walton	10	19	4	....	6	....	1	....	....	7	1	....	....	....	....	....	....	....	....	....

* Engaged in scoring health activities of cities; director of health officers' course in Albany.

† Acting for Dr. Edward Clark.

Table I

CASES, DEATHS AND RATES FOR IMPORTANT COMMUNICABLE DISEASES BY YEARS IN NEW YORK CITY, NEW YORK STATE AND UP-STATE

	NEW YORK STATE					UP-STATE					NEW YORK CITY				
	Cases	Deaths	Case rate	Death rate	Fatality rate	Cases	Deaths	Case rate	Death rate	Fatality rate	Cases	Deaths	Case rate	Death rate	Fatality rate
MEASLES															
1908	58,738	1,175	669.02	13.38	2.012	20,265	203	476.43	4.77	1.001	38,473	972	849.86	21.47	2.526
1909	52,863	1,272	589.42	14.08	2.406	21,072	276	489.29	6.40	1.309	31.791	996	681.91	21.36	3.132
1910	69,878	1,285	763.06	14.03	1.838	34,062	511	781.38	11.72	1.500	35.816	774	746.76	16.13	2.161
1911	48,675	977	520.82	10.45	2.007	22,792	319	516.23	7.22	1.399	25,883	658	524.90	13.34	2.542
1912	65,060	1,050	681.82	11.00	1.613	26,042	377	582.29	8.42	1.447	39,018	673	770.21	13.28	1.724
1913	65,374	1,072	672.04	11.02	1.629	36,024	444	795.40	9.80	1.232	29,350	628	561.40	12.07	2.139
1914	47,883	839	482.66	8.45	1.752	22,090	280	481.78	6.10	1.267	25,793	559	483.36	10.47	2.167
1915	62,660	844	619.70	8.34	1.346	24,474	214	527.16	4.60	.874	38,186	630	697.85	11.51	1.649
1916	67,110	928	650.96	9.00	1.382	45,507	439	968.84	9.34	.964	21,603	489	385.39	8.72	2.262
1917	60,860	892	579.99	8.50	1.465	33,341	335	701.16	7.04	1.004	27,519	557	479.38	9.70	2.024
1918	74,869	1,293	700.77	12.10	1.727	46,194	504	960.87	10.47	1.091	28,675	789	488.04	13.42	2.751
1919	19,882	354	182.71	3.25	1.780	11,688	136	240.18	2.79	1.163	8,194	218	136.34	3.62	2.660
SCARLET FEVER															
1908	30,403	1,668	346.29	18.99	5.486	7,467	341	175.54	8.01	4.566	22,936	1,327	506.65	29.31	5.785
1909	22,747	1,204	253.62	13.42	5.293	9,743	517	226.23	12.00	5.306	13,004	787	278.93	16.88	6.051
1910	31,504	1,616	344.02	17.64	5.129	12,220	664	280.32	15.23	5.433	19,284	952	402.07	19.84	4.936
1911	25,830	1,149	276.38	12.29	4.448	10,037	408	227.33	9.24	4.064	15,793	741	320.28	15.02	4.691
1912	18,579	789	194.70	8.26	4.246	5,863	174	131.09	3.89	2.967	12,716	615	251.01	12.14	4.836
1913	17,263	837	177.46	8.60	4.848	6,524	330	144.04	7.28	5.058	10,739	507	206.51	9.74	4.721
1914	18,596	687	187.44	6.92	3.694	7,491	235	163.37	5.12	3.137	11,105	452	208.10	8.47	4.070
1915	15,802	409	156.28	4.04	2.588	5,923	118	127.58	2.54	1.992	9,879	291	180.51	5.31	2.945
1916	11,083	178	107.50	1.72	1.606	5,268	82	112.15	1.74	1.556	5,815	96	103.73	1.71	1.650
1917	15,234	261	145.18	2.48	1.713	9,174	139	192.82	2.92	1.515	6,060	122	105.56	2.12	2.013
1918	10,098	300	94.51	2.80	2.970	5,638	122	117.21	2.53	2.163	4,460	178	75.90	3.02	3.991
1919	12,075	270	110.96	2.48	2.236	7,481	134	153.73	2.75	1.791	4,594	136	76.44	2.26	2.960
WHOOPING COUGH															
1908	....	503	....	5.72	....	....	318	....	7.47	....	....	185	....	4.08	....
1909	....	783	....	8.73	....	....	382	....	8.87	....	....	401	....	8.60	....
1910	....	727	....	7.93	....	....	433	....	9.93	....	....	294	....	6.12	....
1911	8,362	819	89.47	8.76	9.794	5,116	436	115.87	9.87	8.522	3,246	383	65.82	7.76	11.799

1912	7,821	683	81.96	7.15	8.732	5,638	392	126,06	8.76	6.952	2,183	291	43.09	5.74	13.330
1913	9,018	822	92.70	8.45	9.115	5,520	402	121.88	8.87	7.282	3,498	420	67.26	8.07	12.006
1914	11,651	730	117.44	7.35	6.265	7,853	451	171.27	9.83	5.743	3,798	279	71.17	5.22	7.345
1915	13,338	759	131,91	7.50	5.690	6,567	363	141.45	7.81	5.527	6,771	396	123.77	7.23	5.848
1916	17,297	745	167,78	7.22	4.307	9,837	393	209,42	8.36	3.995	7,460	352	133.08	6.27	4.718
1917	18,355	886	174.92	8.44	4.827	12,758	401	268.30	8.43	3.143	5,597	485	97.49	8.44	8.665
1918	16,522	1.237	154.64	11.57	7.486	10,964	572	227.94	11.89	5.217	5,558	665	94.59	11.31	11.964
1919	7,283	293	66.93	2.69	4.023	5,615	132	115.38	2.71	2.350	1,668	161	27.75	2.67	9.652
TYPHOID FEVER															
1908	6,976	1,375	79.45	15.66	19.710	3,811	837	89.59	19.67	21.962	3,165	538	69.91	11.88	16.998
1909	7,897	1,315	88.05	14.66	16.651	4,284	751	99.47	17.43	17.530	3,613	564	77.49	12.09	15.610
1910	8,536	1,374	93.21	15.00	16.096	4,801	816	110.13	18.71	16.996	3,735	558	77.87	11.63	14.939
1911	8,083	1,316	86.48	14.08	16.281	4,426	771	100.24	17.46	17.419	3,657	545	74.16	11.05	14.902
1912	6,418	1,128	67.26	11.82	17.575	3,343	629	74.74	14.06	18.815	3,076	499	60.72	9.85	16.222
1913	6,248	1,018	64.22	10.46	16.293	3,605	656	79.59	14.48	18.196	2,643	362	50.82	6.96	13.696
1914	5,481	878	55.24	8.85	16.018	3,221	544	70.25	11.86	16.889	2,260	334	42.35	6.25	14.778
1915	5,484	775	54.23	7.66	14.132	3,028	442	65.22	9.52	14.597	2,456	333	44.89	6.08	13.558
1916	4,417	603	42.84	5.84	13.651	2,788	388	59.35	8.26	13.916	1,629	215	29.06	3.83	13.198
1917	4,293	588	40.91	5.60	13.696	2,851	361	59.95	7.59	12.662	1,442	229	25.11	3.98	15.880
1918	3,391	576	31.73	5.39	16.986	2,153	380	44.76	7.90	17.649	1,238	196	21.07	3.33	15.831
1919	2,551	364	23.44	3.34	14.268	1,697	243	34.87	4.99	14.319	854	121	14.21	2.01	14.168
DIPHTHERIA															
1908	20,759	2,473	236.44	28.16	11.912	4,390	710	103.20	16.69	16.173	16,369	1,763	361.59	38.94	10.770
1909	20,665	2.313	230.41	25.78	11.192	4,613	598	107.11	13.88	12.963	16,052	1,715	344.31	36.78	10.684
1910	22,630	2,433	247.11	26.56	10.751	5,404	718	123.96	16.47	13.286	17,226	1,715	359.16	35.75	9.955
1911	20,007	1,963	214.07	21,00	9.811	6,523	679	147.74	15.37	10.409	13,484	1,284	273.45	26.03	9.522
1912	18,927	1,624	198.35	17.01	8.580	5,394	498	121.60	11.13	9.232	13,533	1,126	267.14	22.22	8.320
1913	20,247	1,853	208.13	19.04	9.151	5,662	519	125.01	11.45	9.166	14,585	1,334	280.46	25.65	9.146
1914	22,537	2,015	227.17	20.31	8.940	5,408	523	117.94	11.40	9.670	17,129	1,492	320.99	27.96	8.710
1915	20,806	1,770	205.77	17.50	8.507	5,527	492	119.05	10.59	8.901	15,279	1,278	279.30	23.36	8.364
1916	19,133	1,524	185.59	14.78	7.965	5,612	493	119.47	10.49	8.784	13,521	1,034	241.21	18.44	7.647
1917	19,183	1,745	182.81	16.62	9.096	6,559	589	137.93	12.38	8,980	12,624	1,156	219.91	20.13	9.157
1918	14,533	1,772	136.02	16.58	12.192	5,079	527	105.59	10.95	10.376	9,454	1,245	160.90	21.18	13.169
1919	25,077	2,053	230.45	18.86	8.186	11,063	813	227.34	16.70	7.348	14,014	1,240	233.19	20.63	8.848
TUBERCULOSIS (all forms)															
1908	26,230	16,550	298.75	188.50	63.095	3,310	6,379	77.81	149.97	192.719	22,920	10,171	506.30	224.67	44.376
1909	32,915	16,117	367.00	179.70	48.965	6,937	6,168	161.07	143.22	88.914	25,979	9,949	557.24	213.41	38.296
1910	37,963	16,337	414.55	178.40	43.034	5.957	6,263	136.65	143.67	105.136	32,006	10,074	667.32	210.04	31.475
1911	33,299	16,548	356.29	177.06	49.695	8,796	6,299	199.22	142.67	71.612	24,513	10,249	497.12	207.84	41.810
1912	30,529	15,989	319.94	167.56	52.373	7,777	6,011	173.89	134.40	77.292	22,752	9,978	449.12	196.96	43.855
1913	31,123	16,152	319.94	166.04	51.897	8,449	6,129	186.55	135.32	72.511	22,674	10,023	436.02	192.74	44.204
1914	31,128	16,559	313.77	166.91	53.196	9,472	6,270	206.58	136.74	66.195	21,602	10,289	404.82	192.81	47.629
1915	33,736	16,445	333.64	162.64	48.746	11,595	6,195	249.75	133.44	53.428	22,141	10,250	404.73	187.36	46.294
1916	32,059	15,820	310 97	153.45	49.346	12,767	6,178	271.80	131.52	48.390	19,292	9,642	244.16	172.01	49.979
1917	28,686	16,556	273,37	157,77	57.714	11,272	6,417	237,05	134,94	56,928	17,414	10,139	303.45	176.62	58.223
1918	24,464	16,953	228.98	158.68	69.297	10,125	6,855	210.49	142.51	67,703	14,339	10,098	244.04	171.86	70.423
1919	25,482	14,352	234.17	131.89	56.322	10,912	5,855	224.24	120.32	53.656	14,570	8,497	242.44	141.39	58.318

Table 2

IMPORTANT COMMUNICABLE DISEASES REPORTED BY MONTHS FOR UP-STATE, NEW YORK CITY AND TOTAL, 1908–1919

	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE		
	Up-State	New York City	Total	Up-State	New York City	Total	Up-State	New York City	Total	Up-State	New York City	Total	Up-State	New York City	Total	Up-State	New York City	Total
TUBERCULOSIS																		
1908	256	1,609	1,865	284	1,518	1,802	330	2,445	2,775	279	1,937	2,216	309	1,673	1,982	347	1,674	2,021
1909	1,469	2,270	3,739	587	1,765	2,352	592	2,505	3,097	563	2,452	3,015	374	2,297	2,671	485	2,298	2,783
1910	167	2,249	2,416	458	2,745	3,203	523	3.974	4,497	451	3,518	3,969	452	2,966	3,418	514	2,178	2,692
1911	658	2,380	3,038	802	2,860	3,662	879	2,340	3,219	706	2,068	2,774	881	2,638	3,519	629	1,745	2,374
1912	515	2,012	2,527	577	2,053	2,630	657	2,030	2,687	611	1,985	2,596	706	2,299	3,005	779	1,836	2,615
1913	750	2,015	2,765	651	1,883	2,534	653	2,460	3,113	658	2,353	3,011	617	2,019	2,636	647	1,927	2,574
1914	779	1,699	2,478	676	1,565	2,241	808	1,954	2,762	878	1,955	2,833	750	1,974	2,724	877	2,037	2,914
1915	721	1,849	2,570	694	2,009	2,703	1,034	2,303	3,337	950	2,202	3,152	914	1,985	2,899	967	1,880	2,847
1916	902	1,613	2,515	1,203	1,638	2,841	1,106	2,053	3,159	1,259	1,749	3,008	1,344	1,602	2,946	1,444	1,800	3,244
1917	986	2,011	2,997	1,027	1,292	2,319	1.015	2,000	3,015	1,023	1,174	2,197	1,055	1,266	2,321	1,056	1,310	2,366
1918	823	1,538	3,361	709	1,344	2,053	897	1,366	2,263	1,111	1,698	2,809	1,097	1,300	2,397	998	1,759	2,757
1919	705	1,270	1,975	647	1,294	1,941	777	1,500	2,377	805	1,374	2,179	988	1,311	2,299	958	1,260	2,218
TYPHOID FEVER																		
1908	288	146	434	293	125	418	217	140	357	174	111	285	191	121	312	236	176	412
1909	316	199	515	243	98	341	262	127	389	181	77	258	171	190	361	173	163	336
1910	302	154	456	272	294	566	305	152	457	202	120	322	187	187	374	188	168	356
1911	310	110	420	380	141	521	352	97	449	246	100	346	217	147	364	213	199	412
1912	245	238	483	174	142	316	235	101	336	309	125	434	287	127	414	125	164	289
1913	178	79	257	143	78	221	124	65	189	337	67	404	256	92	348	136	86	222
1914	203	100	303	163	75	238	226	64	290	229	127	356	232	108	340	178	147	325
1915	180	107	287	157	84	241	159	90	249	104	81	185	125	74	199	160	117	277
1916	140	66	206	148	63	211	100	66	166	179	86	265	157	116	273	194	115	309
1917	178	79	257	210	98	308	212	43	255	150	61	211	119	105	225	143	84	227
1918	90	30	120	97	28	125	135	35	170	140	53	193	143	51	194	93	164	257
1919	88	36	124	69	20	89	60	17	77	53	28	81	69	32	101	97	39	136
DIPHTHERIA																		
1908	451	1,683	2,134	478	1,537	2,015	415	1,893	2,308	250	1,573	1,823	289	1,544	1.833	238	1,284	1,522
1909	480	1,926	2,406	419	1,613	2,032	383	1,735	2,118	303	1,281	1,584	266	1,325	1,591	316	1,583	1,899
1910	504	1,514	2,018	444	1,581	2,025	402	2,087	2,489	403	2,044	2,447	425	2,229	2,654	303	1,532	1,835
1911	602	1,335	1,937	497	1,692	2,189	433	1,350	1,783	382	1,235	1,617	481	1,686	2,167	476	1,152	1,628
1912	738	1,159	1,897	513	1,241	1,754	504	1,386	1,890	379	1,274	1,653	393	1,199	1,592	362	1,215	1,577

1913	549	1,642	2,191	458	1,449	1,907	454	1,455	1,909	413	1,466	1,879	391	1,474	1,865	350	1,310	1,660
1914	515	1,546	2,061	509	1,642	2,151	382	1,512	1,894	306	1,567	1,873	337	1,802	2,139	311	1,737	2,048
1915	560	1,435	1,995	430	1,533	1,963	464	1,610	2,074	319	1,352	1,671	392	1,341	1,733	336	1,634	1,970
1916	593	1,572	2,165	382	1,485	1,867	405	1,570	1,975	359	1,329	1,688	437	1,715	2,152	422	1,570	1,992
1917	635	1,109	1,744	521	1,194	1,715	556	1,211	1,767	458	1,132	1,590	444	1,267	1,711	384	1,198	1,582
1918	485	1,047	1,532	363	898	1,261	463	1,086	1,549	402	1,249	1,651	408	288	696	375	1,231	1,606
1919	897	1,327	2,224	752	1,359	2,111	828	1,609	2,437	669	1,412	2,081	675	1,607	2,282	775	1,294	2,069
MEASLES																		
1908	2,408	3,388	5,796	3,011	4,973	7,984	3,713	8,306	12,019	4,141	7,060	11,201	3,808	5,974	9,777	1,389	3,852	5,241
1909	2,030	2,336	4,366	2,498	2,263	4,761	2,493	4,383	6,876	2,213	4,840	7,053	2,122	4,911	7,033	1,950	6,203	8,153
1910	5,991	3,735	9,726	5,481	4,566	10,047	5,565	8,205	13,770	3,895	6,036	9,931	4,065	6,425	10,490	3,608	3,229	6,837
1911	2,765	1,303	4,068	2,920	2,059	4,979	3,901	2,756	6,657	4,003	4,027	8,030	3,816	6,543	10,359	1,932	3,445	5,377
1912	2,161	2,670	4,831	2,207	4,219	6,426	3,008	7,713	10,721	3,404	7,938	11,342	4,012	7,272	11,284	3,390	4,132	7,522
1913	4,483	2,126	6,609	5,751	2,169	7,920	5,508	4,369	9,877	5,355	5,256	10,611	4,886	6,231	11,117	3,786	4,471	8,257
1914	2,847	1,519	4,366	3,068	2,190	5,258	3,506	3,483	6,989	3,407	4,485	7,892	3,393	5,483	8,876	2,353	4,094	6,447
1915	1,241	1,355	2,596	1,469	2,067	3,536	1,672	5,053	6,725	2,512	7,849	10,361	3,260	9,088	12,348	3,282	7,602	10,884
1916	5,170	1,242	6,412	5,450	1,894	7,344	6,908	3,281	10,189	7,553	4,208	11,761	7,418	4,579	11,997	6,180	3,393	9,573
1917	2,492	899	3,391	3,136	1,871	5,007	3,988	3,914	7,902	4,817	4,634	9,451	5,976	5,736	11,712	5,208	4,355	9,563
1918	3,503	4,064	7,767	4,093	4,477	8,570	4,317	6,345	13,662	8,831	6,003	14,834	9,871	4,536	14,407	5,849	1,812	7,661
1919	560	146	706	763	170	933	1,183	264	1,447	1,609	456	2,065	2,099	978	3,077	1,665	604	2,269
SCARLET FEVER																		
1908	675	2,512	3,187	697	3,221	3,918	917	4,914	5,831	638	2,774	3,412	778	3,769	4,547	467	1,781	2,248
1909	1,039	1,657	2,696	1,019	1,498	2,517	1,211	1,964	3,175	1,120	1,355	2,475	936	1,317	2,253	794	1,096	1,890
1910	1,421	2,234	3,655	1,884	2,681	4,565	1,782	3,564	5,346	1,421	2,991	4,412	1,327	2,734	4,061	882	1,604	2,486
1911	1,289	1,795	3,084	1,246	2,593	3,839	1,732	2,395	4,127	1,316	2,433	3,749	1,185	2,858	4,043	626	1,187	1,813
1912	803	1,113	1,916	806	1,545	2,351	912	2,229	3,141	791	1,990	2,781	627	1,694	2,321	368	1,138	1,506
1913	716	1,505	2,221	746	1,437	2,183	878	1,852	2,730	768	1,526	2,294	792	1,245	2,037	563	747	1,310
1914	717	1,252	1,969	749	1,368	2,117	987	1,677	2,664	834	1,599	2,433	780	1,709	2,489	565	951	1,516
1915	691	1,094	1,785	651	1,201	1,852	660	1,592	2,252	700	1,731	2,431	676	1,392	2,068	450	987	1,437
1916	627	680	1,307	556	753	1,309	619	948	1,567	644	842	1,486	579	792	1,371	414	489	903
1917	872	578	1,450	1,049	657	1,706	1,615	622	2,237	1,651	775	2,426	873	872	1,745	564	515	1,079
1918	759	579	1,338	632	546	1,178	771	634	1,405	770	579	1,349	547	512	1,069	326	321	647
1919	586	510	1,096	732	553	1,385	881	676	1,557	658	579	1,237	660	554	1,214	451	280	731
WHOOPING COUGH																		
1908	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1909	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1910	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1911	399	335	734	331	432	763	514	423	937	471	267	738	539	450	989	495	258	753
1912	789	187	976	598	173	771	463	246	709	578	200	778	598	327	925	522	231	753
1913	462	198	660	395	262	657	416	323	739	321	543	864	382	503	885	482	382	864
1914	850	220	1,070	641	258	899	902	275	1,177	940	489	1,429	1,166	387	1,553	914	393	1,307
1915	587	310	897	602	409	1,011	612	489	1,101	469	559	1,028	444	637	1,081	486	701	1,187
1916	952	465	1,417	794	526	1,320	868	930	1,798	795	1,094	1,889	1,099	1,140	2,239	1,011	1,033	2,044
1917	676	122	798	790	153	943	860	177	1,037	1,164	285	1,449	1,248	418	1,666	1,163	511	1,674
1918	1,469	824	2,293	1,063	786	1,849	1,304	812	2,116	1,217	800	2,017	1,374	675	2,049	1,156	491	1,647
1919	222	48	270	255	51	306	241	36	277	159	61	220	308	70	378	311	80	391

Table 2

IMPORTANT COMMUNICABLE DISEASES REPORTED BY MONTHS FOR UP-STATE, NEW YORK CITY AND TOTAL, 1908-1919 — *Concluded*

	JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			TOTAL		
	Up-State	New York City	Total	Up-State	New York City	Total	Up-State	New York City	Total	Up-State	New York City	Total	Up-State	New York City	Total	Up-State	New York City	Total	Up-State	New York City	Total
TUBERCULOSIS																					
1908	137	2,160	2,297	207	1,755	1,962	226	2,431	2,657	305	2,023	2,328	271	1,826	2,097	359	1,869	2,228	3,310	22,920	26,230
1909	725	1,913	2,638	519	2,019	2,529	312	2,352	2,664	437	1,839	2,276	460	2,483	2,943	422	1,786	2,208	6,936	25,979	32,915
1910	490	2,131	2,621	485	2,890	3,375	454	2,402	2,856	710	1,974	2,684	511	2,729	3,240	742	2,250	2,992	5,957	32,006	37,963
1911	826	1,773	2,599	721	2,309	3,030	627	1,768	2,395	605	1,593	2,198	701	2,033	2,734	751	1,690	2,441	8,786	25,197	33,983
1912	789	1,835	2,624	601	1,716	2,317	651	1,806	2,457	790	1,860	2,650	547	1,589	2,136	554	1,731	2,285	7,777	22,752	30,529
1913	1,073	1,868	2,941	647	1,515	2,162	673	1,666	2,339	753	1,773	2,526	643	1,663	2,306	684	1,532	2,216	8,449	22,674	31,123
1914	726	1,769	2,495	678	1,675	2,353	756	1,772	2,528	1,145	1,867	3,012	709	1,548	2,257	744	1,787	2,531	9,526	21,602	31,128
1915	901	1,818	2,719	1,181	1,487	2,668	992	1,935	2,927	989	1,615	2,604	1,100	1,448	2,548	1,152	1,610	2,762	11,595	22,141	33,736
1916	1,114	1,418	2,532	1,090	1,505	2,595	930	1,531	2,461	828	1,322	2,150	827	1,475	2,302	720	1,586	2,306	12,767	19,292	32,059
1917	1,006	1,469	2,475	954	1,804	2,758	820	1,119	1,939	891	1,491	2,382	757	1,385	2,142	682	1,093	1,775	11,272	17,414	28,686
1918	977	873	1,850	996	1,326	2,322	712	902	1,614	635	721	1,356	568	707	1,275	602	805	1,407	10,125	14,339	24,464
1919	1,168	869	2,037	928	1,123	2,051	1,109	775	1,884	1,017	1,573	2,590	786	1,207	1,993	1,024	1,014	2,038	10,912	14,570	25,482
TYPHOID FEVER																					
1908	211	306	517	449	507	956	532	665	1,197	541	382	923	342	244	586	337	242	579	3,811	3,165	6,976
1909	256	218	474	476	375	851	761	1,119	1,880	667	453	1,120	435	432	867	343	162	505	4,284	3,613	7,897
1910	240	246	486	586	617	1,203	843	614	1,457	780	513	1,293	521	468	989	375	202	577	4,801	3,735	8,536
1911	315	326	641	641	766	1,407	649	519	1,168	463	430	893	312	480	792	328	342	670	4,426	3,657	8,083
1912	248	273	521	422	585	1,007	444	538	982	446	390	836	215	198	413	192	195	387	3,342	3,076	6,418
1913	280	137	417	391	229	620	610	728	1,338	546	631	1,177	319	289	608	285	162	447	2,605	2,643	6,248
1914	216	200	416	391	303	694	519	470	989	439	337	776	251	170	421	174	159	333	3,221	2,260	5,481
1915	238	191	429	422	509	931	444	423	867	403	429	832	309	184	493	327	167	494	3,028	2,456	5,484
1916	248	132	380	393	258	651	514	281	795	307	223	530	216	133	349	192	90	282	2,788	1,629	4,417
1917	232	93	325	373	185	558	502	365	867	363	178	541	220	87	307	149	63	212	2,851	1,442	4,293
1918	144	170	314	280	265	545	388	209	597	362	125	487	153	52	205	128	56	184	2,153	1,238	3,391
1919	159	77	236	276	115	391	364	199	563	264	144	408	114	106	220	84	41	125	1,697	854	2,551
DIPHTHERIA																					
1908	108	1,043	1,151	186	601	787	324	1,091	1,415	567	1,238	1,805	613	1,347	1,960	471	1,535	2,006	4,390	16,369	20,759
1909	267	859	1,126	239	677	916	317	974	1,291	458	963	1,421	584	1,715	2,299	581	1,401	1,982	4,613	16,052	20,665
1910	248	1,220	1,468	331	1,032	1,363	358	652	1,010	577	932	1,509	769	1,375	2,144	640	1,028	1,668	5,404	17,226	22,630
1911	398	811	1,209	435	914	1,349	539	613	1,152	703	753	1,456	790	1,214	2,004	787	1,139	1,926	6,523	13,894	20,417
1912	282	......	282	287	764	1,051	320	656	976	512	1,127	1,639	582	1,310	1,892	522	1,416	1,938	5,394	12,747	18,141

1913	325	962	1,287	271	715	986	397	734	1,131	713	918	1,631	532	806	1,338	809	1,654	2,463	5,662	14,585	20,247
1914	222	1,396	1,618	266	838	1,104	417	941	1,358	693	1,271	1,964	852	1,364	2,216	598	1,513	2,111	5,408	17,129	22,537
1915	268	1,120	1,388	250	768	1,018	381	722	1,103	713	1,081	1,794	760	1,293	2,053	654	1,390	2,044	5,527	15,279	20,806
1916	354	1,064	1,418	317	511	828	369	433	802	632	608	1,240	669	734	1,403	673	930	1,603	5,612	13,521	19,133
1917	369	934	1,303	350	660	1,010	516	680	1,196	880	1,086	1,966	798	1,091	1,889	648	1,062	1,710	6,559	12,624	19,183
1918	336	893	1,229	277	541	818	349	472	821	502	801	1,303	457	836	1,293	662	112	774	5,079	9,454	14,533
1919	603	800	1,403	595	603	1,198	877	582	1,459	1,445	868	2,313	1,467	1,062	2,538	1,471	1,491	2,962	11,063	14,014	25,077
MEASLES																					
1908	313	1,587	1,900	142	373	515	74	375	449	141	465	606	403	744	1,147	727	1,376	2,103	20,265	38,473	58,738
1909	743	1,952	2,695	243	788	1,031	239	449	688	724	436	1,160	1,919	1,338	3,257	3,898	1,892	5,790	21,072	31,791	52,863
1910	1,215	1,259	2,474	322	561	883	220	232	452	442	280	722	1,011	582	1,593	2,247	706	2,953	34,062	35,816	69,878
1911	886	1,858	2,744	230	790	1,020	148	317	465	387	355	742	674	803	1,477	1,130	1,627	2,757	22,792	25,883	48,675
1912	1,702	1,982	3,684	552	604	1,156	354	221	575	886	317	1,203	1,716	769	2,485	2,650	1,429	4,070	26,042	39,257	65,299
1913	1,720	1,991	3,711	411	576	987	307	283	590	1,136	384	1,520	1,086	548	1,634	1,595	946	2,541	36,024	29,350	65,374
1914	1,139	1,734	2,873	589	534	1,123	289	244	533	347	324	671	378	679	1,057	774	1,024	1,798	22,090	25,793	47,883
1915	1,789	2,486	4,275	635	615	1,250	343	270	613	987	325	1,312	2,804	581	3,385	4,480	895	5,375	24,474	38,186	62,660
1916	3,399	1,813	5,212	656	417	1,073	226	119	345	323	74	397	848	127	975	1,376	456	1,832	45,507	21,603	67,110
1917	2,244	1,368	3,612	474	480	954	311	214	525	656	362	1,018	1,384	870	2,254	2,655	2,816	5,471	33,341	27,519	60,860
1918	4,150	664	4,814	1,088	241	1,329	342	114	456	510	76	586	363	67	430	277	76	353	46,194	28,675	74,869
1919	885	355	1,240	257	175	432	95	125	220	282	371	653	478	1,106	1,584	1,812	3,444	5,256	11,688	8,194	19,882
SCARLET FEVER																					
1908	72	841	913	240	333	573	439	533	972	708	546	1,254	952	706	1,658	884	1,006	1,890	7,467	22,936	30,403
1909	363	361	724	319	289	608	376	378	754	645	505	1,150	815	1,147	1,962	1,106	1,437	2,543	9,743	13,004	22,747
1910	445	542	987	296	392	688	277	302	579	584	340	924	889	784	1,673	1,012	1,116	2,128	12,220	19,284	31,504
1911	321	453	774	191	302	493	244	209	453	499	383	882	608	665	1,273	780	785	1,565	10,037	16,058	26,095
1912	223	532	755	144	279	423	199	254	453	298	371	669	287	619	906	405	1,078	1,483	5,863	12,842	18,705
1913	308	355	663	204	232	436	282	253	535	350	313	663	379	488	867	538	786	1,324	6,524	10,739	17,263
1914	324	477	801	363	144	507	355	239	594	509	390	899	643	602	1,245	665	797	1,462	7,491	11,205	18,696
1915	267	409	676	166	179	345	173	147	320	397	232	629	487	395	882	605	520	1,125	5,923	9,879	15,802
1916	229	300	529	118	78	196	152	72	224	295	159	454	465	267	732	570	435	1,005	5,268	5,815	11,083
1917	308	267	575	171	105	276	258	178	436	465	345	810	667	527	1,194	681	619	1,300	9,174	6,060	15,234
1918	235	206	441	195	105	300	249	164	413	348	244	592	344	206	550	462	364	826	5,638	4,460	10,098
1919	299	146	445	205	81	286	402	144	546	668	239	907	877	295	1,172	1,062	537	1,599	7,481	4,594	12,075
WHOOPING COUGH																					
1908	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1909	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1910	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1911	414	223	637	341	265	606	234	161	395	261	133	394	568	183	751	549	116	665	5,116	3,246	8,362
1912	499	201	700	336	136	472	254	114	368	292	113	405	329	129	458	380	126	506	5,638	2,183	7,821
1913	408	281	689	597	202	799	300	215	515	359	184	543	608	242	850	790	163	953	5,520	3,498	9,018
1914	448	318	766	381	374	755	256	286	542	262	336	598	411	253	664	682	229	911	7,853	3,818	11,671
1915	596	806	1,402	467	806	1,273	277	630	907	578	493	1,071	657	468	1,125	792	463	1,255	6,567	6,771	13,338
1916	1,282	968	2,250	933	755	1,688	509	246	755	460	121	581	584	97	681	550	85	635	9,837	7,460	17,297
1917	1,565	771	2,336	1,025	1,018	2,043	833	566	1,399	1,147	435	1,582	1,223	577	1,800	1,064	564	1,628	12,758	5,597	18,355
1918	1,041	482	1,523	794	298	1,092	610	151	761	331	101	432	331	80	411	274	58	332	10,964	5,558	16,522
1919	571	184	755	518	152	670	444	145	589	680	140	820	996	251	1,247	910	440	1,350	5,615	1,668	7,283

Table 3

REPORTED CASES, DEATHS, CASE RATE, DEATH RATE AND CASE FATALITY RATE PER 100,000 POPULATION FOR CERTAIN COMMUNICABLE DISEASES, BY COUNTIES, 1919

COUNTIES	TYPHOID FEVER					MEASLES					SCARLET FEVER					WHOOPING COUGH					DIPHTHERIA				
	Cases	Deaths	Case rate	Death rate	Case fatality rate	Cases	Deaths	Case rate	Death rate	Case fatality rate	Cases	Deaths	Case rate	Death rate	Case fatality rate	Cases	Deaths	Case rate	Death rate	Case fatality rate	Cases	Deaths	Case rate	Death rate	Case fatality rate
Albany	59	13	30.857	6.799	.220	719	8	376.037	4.184	.011	220	1	115.060	.523	.004	139	7	72.697	3.661	.050	168	17	87.864	8.891	.101
Allegany	17	1	43.231	2.543	.058	818	1	2,080.174	2.543	.001	39	2	99.177	5.086	.051	85	2	216.155	5.086	.023	9	1	22.887	2.543	.111
Broome	16	2	16.000	2.000	.125	67	1	67.000	1.000	.014	159	2	159.000	2.000	.012	23	1	23.000	1.000	.043	163	12	163.000	12.000	.073
Cattaraugus	48	8	61.344	10.224	.166	147	2	187.866	2.556	.013	41	2	52.398	2.556	.048	117	3	149.526	3.834	.025	311	15	397.458	19.170	.048
Cayuga	22	7	34.012	10.822	.318	27	....	41.742	......	....	137	2	211.802	3.092	.014	8	....	12.368	......	....	61	4	94.306	6.184	.065
Chautauqua	31	8	24.614	6.352	.258	149	1	118.306	.794	.006	171	3	135.774	2.382	.017	240	3	190.560	2.382	.012	284	23	225.496	18.262	.080
Chemung	29	4	46.429	6.404	.137	491	1	786.091	1.601	.002	79	2	126.479	3.202	.025	534	3	854.934	4.803	.005	58	8	92.858	12.808	.137
Chenango	6	2	15.978	5.326	.333	45	....	119.835	......	....	85	2	226.355	5.326	.023	141	4	375.483	10.652	.028	27	2	71.901	5.326	.074
Clinton	19	....	40.394	......	....	26	....	55.276	......	....	135	5	287.010	10.630	.027	87	3	184.962	6.378	.034	95	6	201.970	12.756	.063
Columbia	12	1	26.998	2.249	.083	183	....	411.567	......	....	25	....	56.225	......	....	23	1	51.727	2.249	.043	33	2	74.217	4.498	.060
Cortland	13	2	42.289	6.506	.153	26	1	84.578	3.253	.038	199	....	647.347	......	....	13	....	42.289	......	....	9	....	29.277	......	....
Delaware	14	1	30.184	2.156	.071	22	....	47.432	......	....	48	....	103.488	......	....	56	1	120.736	2.156	.017	33	4	71.148	8.624	.121
Dutchess	32	2	34.176	2.136	.062	41	....	43.788	......	....	90	2	96.120	2.136	.022	354	6	378.072	6.408	.016	211	13	225.348	13.884	.061
Erie	377	47	62.205	7.755	.124	1,980	59	326.700	9.735	.029	1216	28	206.040	4.620	.023	712	21	117.480	3.465	.029	4,212	331	694.980	54.615	.078
Essex	5	1	15.805	3.161	.200	4	....	12.644	......	....	13	....	41.093	......	....	95	1	300.295	3.161	.010	20	....	63.220	......	....
Franklin	11	2	23.606	4.292	.181	39	....	83.694	......	....	59	....	126.614	......	....	26	1	55.796	2.146	.038	32	3	68.672	6.438	.093
Fulton	10	2	21.540	4.308	.200	339	1	730.206	2.154	.002	11	....	23.694	......	....	11	....	23.694	......	....	26	....	56.004	......	....
Genesee	3	1	6.957	2.319	.333	41	....	95.079	......	....	87	2	201.753	4.638	.022	72	....	166.968	......	....	40	1	92.760	2.319	.025
Greene	20	4	66.620	13.324	.200	28	....	93.268	......	....	12	....	39.972	......	....	23	1	76.613	3.331	.043	39	1	129.909	3.331	.025
Hamilton	....	....	......	......	....	8	....	173.792	......	....	3	....	65.172	......	....	....	....	......	......	....	1	....	21.724	......	....
Herkimer	31	4	44.144	5.696	.129	14	2	19.936	2.848	.142	149	1	212.176	1.424	.006	32	....	45.568	......	....	99	8	140.976	11.392	.080
Jefferson	41	4	50.266	4.904	.097	10	....	12.260	......	....	224	8	274.624	9.808	.035	186	....	228.036	......	....	171	15	209.646	18.390	.087
Lewis	8	3	29.752	11.157	.375	......	....	......	......	....	54	....	200.826	......	....	4	1	14.876	3.719	.250	9	1	33.471	3.719	.111
Livingston	31	2	80.042	5.164	.064	75	....	193.650	......	....	71	1	183.322	2.582	.014	51	....	131.682	......	....	100	18	258.200	46.476	.180
Madison	7	2	16.009	4.574	.285	20	....	48.740	......	....	115	1	263.005	2.287	.008	70	2	160.090	4.574	.028	45	2	102.915	4.574	.044
Monroe	52	11	14.976	3.168	.211	1,001	9	288.288	2.592	.008	690	15	198.720	4.320	.021	114	5	32.832	1.440	.043	796	54	229.248	15.552	.067
Montgomery	6	....	9.438	......	....	753	6	1,184.469	9.438	.007	53	....	83.369	......	....	51	1	80.223	1.573	.019	167	6	262.691	9.438	.035

Nassau..........	9	1	6.309	.701	.111	120	3	84.120	2.103	.025	139	1	97.439	.701	.007	98	2	68.698	1.402	.020	269	21	188.569	14.721	.078
Niagara.........	84	24	69.132	19.752	.285	1,508	12	1,241.084	9.876	.007	279	4	229.617	3.292	.014	182	5	149.786	4.115	.027	138	8	113.574	6.584	.057
Oneida..........	40	2	22.520	1.126	.050	323	7	181.849	3.941	.021	142	5	79.946	2.815	.025	332	15	186.916	8.445	.045	315	35	177.345	19.705	.111
Onondaga........	60	14	26.760	6.244	.233	63	2	28.098	.892	.031	515	11	229.690	4.906	.021	49	6	21.854	2.676	.122	344	28	153.424	12.488	.081
Ontario.........	16	3	28.304	5.307	.187	39	....	68.991	......	....	72	....	127.368	......	....	133	3	235.277	5.307	.022	67	6	118.523	10.614	.089
Orange..........	27	9	22.572	7.524	.333	55	....	45.980	......	....	136	1	113.696	.836	.007	40	2	33.440	1.672	.050	204	16	170.544	13.376	.078
Orleans..........	9	....	25.398	......	....	105	....	70.550	......	....	17	1	47.974	2.822	.058	....	1	......	2.822	....	37	5	104.414	14.110	.135
Oswego..........	29	3	36.569	3.783	.103	24	....	30.264	......	....	121	1	152.581	1.261	.008	33	2	41.613	2.522	.060	83	4	104.663	5.044	.048
Otsego..........	23	1	46.345	2.015	.043	24	....	48.360	......	....	58	1	116.870	2.015	.017	20	....	40.300	......	....	47	5	94.705	10.075	.106
Putnam..........	4	....	35.616	......	....	16	....	142.464	......	....	12	....	106.848	......	....	22	....	195.888	......	....	19	2	169.176	17.808	.105
Rensselaer.......	45	6	37.305	4.974	.133	36	2	29.844	1.658	.055	152	3	126.008	2.487	.019	26	3	21.554	2.487	.115	181	14	150.049	11.606	.077
Rockland........	2	1	4.268	2.134	.500	42	....	89.628	......	....	24	....	51.216	......	....	19	2	40.546	4.268	.105	111	5	236.874	10.670	.045
St. Lawrence.....	35	8	38.290	8.752	.228	82	....	89.708	......	....	175	2	191.450	2.188	.011	26	1	28.444	1.094	.038	106	11	115.964	12.034	.103
Saratoga........	64	5	100.224	7.830	.078	195	1	305.370	1.566	.005	35	1	54.810	1.566	.028	12	....	18.792	......	....	96	2	150.336	3.132	.020
Schenectady.....	14	2	13.160	1.880	.142	68	4	63.920	3.760	.058	114	1	107.160	.940	.008	51	....	47.940	......	....	98	6	92.120	5.640	.061
Schoharie........	27	....	120.663	......	....	16	....	71.504	......	....	14	1	62.566	4.469	.071	3	....	13.407	......	....	13	....	58.097	......	....
Schuyler.........	4	....	28.672	......	....	9	....	64.512	......	....	10	....	71.680	......	....	9	1	64.512	7.168	.111	4	1	28.672	7.168	.250
Seneca..........	11	....	46.046	......	....	109	....	456.274	......	....	129	1	539.994	4.186	.007	84	....	351.624	......	....	76	3	318.136	12.558	.039
Steuben.........	50	2	59.600	2.384	.040	121	3	144.232	3.576	.024	26	1	30.992	1.192	.038	337	4	401.704	4.768	.011	121	13	144.232	15.496	.107
Suffolk..........	66	13	59.598	11.739	.196	40	1	36.120	.903	.025	120	3	108.360	2.709	.025	82	2	74.046	1.806	.024	154	14	139.062	12.642	.090
Sullivan.........	22	3	52.712	7.188	.136	20	....	47.920	......	....	36	....	86.256	......	....	16	....	38.336	......	....	40	....	95.840	......	....
Tioga...........	9	....	35.253	......	....	48	....	188.016	......	....	59	1	231.103	3.917	.016	32	....	125.344	......	....	72	8	282.024	31.336	.111
Tompkins........	13	1	33.449	2.573	.076	19	....	48.887	......	....	179	3	460.567	7.719	.016	38	....	97.774	......	....	5	1	12.865	2.573	.200
Ulster...........	24	5	29.952	6.240	.208	158	....	197.184	......	....	136	1	169.728	1.248	.007	192	10	239.616	12.480	.052	203	13	253.344	16.224	.064
Warren..........	7	....	20.853	......	....	271	1	807.309	2.979	.003	13	1	38.727	2.979	.076	23	1	68.517	2.979	.043	32	1	95.328	2.979	.031
Washington......	5	1	10.800	2.160	.200	16	1	34.560	2.160	.062	27	....	58.320	......	....	92	....	198.720	......	....	33	....	71.280	......	....
Wayne..........	12	1	21.396	1.783	.083	38	....	67.754	......	....	93	2	165.819	3.566	.021	69	1	123.027	1.783	.014	74	4	131.942	7.132	.054
Westchester.....	52	3	14.820	.855	.057	908	4	258.780	1.140	.004	374	4	106.590	1.140	.010	304	4	86.640	1.140	.013	858	35	244.530	9.975	.040
Wyoming........	13	2	38.337	5.894	.153	23	....	67.827	......	....	81	1	238.869	2.947	.012	14	....	41.286	......	....	38	1	112.062	2.947	.026
Yates...........	1	....	5.257	......	....	119	1	625.583	5.257	.008	8	....	42.056	......	....	11	....	57.827	......	....	6	....	31.542	......	....

DIVISION OF PUBLIC HEALTH NURSING

DIVISION OF PUBLIC HEALTH NURSING

HERMANN M. BIGGS, M.D., *Commissioner of Health, Albany, N. Y.:*

SIR.— I have the honor to submit to you the attached report of the Division of Public Health Nursing for the calendar year 1919.

During the year 1919 progress in the work of the Division of Public Health Nursing has been marked by the inauguration of several new activities in addition to the carrying out of the well established program of former years. For the first time in the history of the Department the public health nurses of the State were invited to attend the Annual Conference of Health Officers, held at Saratoga Springs. At this conference 275 public health nurses employed by local boards of health, school trustees, private organizations, industries, insurance companies and philanthropic societies were in attendance, and as a result of this meeting the State Organization for Public Health Nursing has voted to meet annually with the health officers in conference, realizing that by so doing they will be brought in close touch with every phase of public health work in a manner impossible at meetings conducted solely for public health nurses.

Previous to the holding of the conference a complete census of the public health nurses of the State was made showing 953 nurses employed as follows: Fifteen by the State Department of Health; 163 by local boards of health; 224 by boards of education; 123 by various industries; 60 by the Metropolitan Insurance Company; 317 by private organizations, and 51 jointly by several departments of the municipal government or in conjunction with local philanthropic organizations. When we consider the fact that five years ago in the State outside of the City of New York there were less than 100 public health nurses employed, it is evident that the value of the public health nurse's services is recognized in carrying out the duties and activities of local health authorities and the broader program of health protection as outlined by the State Department of Health.

During the past year, in order to visualize the work of the public health nurse a scenario for a moving picture film was prepared by the Division of Public Health Education. This film is available for use in districts where the employment of public health nurses is desired. In order that important information relative to public health nursing may be furnished to all nurses engaged in the work throughout the State, during the coming year a monthly "Public Health Nurses' Bulletin" wil be issued by the Department. A circular entitled "The Public Health Nurse And The Work She Does" has also been prepared, outlining the duties and activities of the public health nurse for use of nurses, health officers, physicians and others interested in the subject.

A list of nurses' registries throughout the State has been secured during the year and is on file in the Albany office of the Department. Through this registry the number of public health nurses available for employment in the advent of an emergency is easily obtainable. The need for this information became apparent during the influenza epidemic last year.

In order to extend the present activities of our Department to improve the conditions of health and welfare of the industrial workers of the State a survey of one of the largest industrial plants having a well organized health program was undertaken by one of the State supervising nurses to learn what was being done in that particular industry to inform employees in the ways of healthful living and how to avoid and overcome the handicaps of occupation to which they might be exposed, looking to the extension of similar work to other industrial plants in the State and to enlist the interest and cooperation of other employers in a similar program.

During the past year in order to secure exact information as to the number of public health nurses needed to provide adequate service in rural districts of the State each of the fifteen Department Sanitary Supervisors was asked to furnish a list of the number of nurses needed in their respective districts and to suggest locations for their headquarters. From the information thus secured it appears there is urgent need for the appointment of at least 404 additional public health nurses in the rural districts of the State in order that these districts may have available their needed services.

Although details of the plan for cooperative public health work between the State Department of Health and the American Red Cross have not yet been fully worked out, it is contemplated to materially increase the public health nursing facilities of the State as a result of such cooperative arrangement, thus meeting the need for rural public health nursing service temporarily or until local municipalities can take over the maintenance of these nurses.

Obviously a retrospect of the work of this Division is largely one of the work of the various divisions of the Department, the several nurses employed in the Nursing Division being assigned as follows:

Winifred Noon, R. N., Supervising Nurse of Child Hygiene.

Mary Muldowney, R. N., Supervising Nurse of Midwives.

Mathilde Kuhlman, R. N., Supervising Nurse of Tuberculosis.

Mrs. C. E. L. Chichester, R. N., Supervising Nurse of Venereal Diseases and Social Service Worker.

C. Josephine Durkee, R. N., Supervising Nurse of Industrial Hygiene.

Mrs. Katherine B. Whitmore, R. N., Supervising Nurse of Public Health Education.

Elizabeth Rennert, R. N., Supervising Nurse of Communicable Diseases.

Mary M. Kenny, Supervising Nurse of After-Care of Poliomyelitis.

Mrs. Laura Duryee, R. N., Supervising Nurse of After-Care of Poliomyelitis.

Gertrude Heatherington, Supervising Nurse of After-Care of Poliomyelitis.

Helena Mahony, Supervising Nurse of After-Care of Poliomyelitis.

Edith Rebstock, R. N., Supervising Nurse of After-Care of Poliomyelitis.

Elizabeth Fitzpatrick, Supervising Nurse of After-Care of Poliomyelitis.

Alyce McGaulley, R. N., Supervising Nurse of After-Care of Poliomyelitis.

Elizabeth J. Nash, R. N., Supervising Nurse of After-Care of Poliomyelitis.

The Division of Child Hygiene

The State Supervising Nurse assigned to this work has visited child welfare stations in 87 municipalities for the purpose of standardizing their work, plans for an intensified prenatal campaign, including prenatal instruction of midwives and prenatal clinics being arranged wherever possible.

An inspection of the Day Nurseries in the State has also been made by this nurse, furnishing accurate data concerning their supervision and management for use by the Department. The establishment of additional Little Mothers' Leagues has been brought about in many municipalities during the year and addresses on Child Welfare delivered by the state nurse in connection with exhibits held in 32 different localities. In one county (Westchester), in order to stimulate interest in child welfare work the County Chapter of the American Red Cross equipped a model child welfare station in the interior of an auto truck, sending the truck into practically all the municipalities in the county where it was thought the need for child welfare work should be demonstrated. The State Supervising Nurse secured cooperation with local health departments, Red Cross auxiliaries and visiting nursing associations; arranged meetings at which health films were shown and addresses made by local health officers and other professional health workers. Little Mothers' Leagues were organized in practically every town visited.

The State Supervising Nurse assigned to the supervision of midwives reports the following activities during the year:

Total number of midwives in State		558	
Licensed	457		
Unlicensed	107		
License revoked		1	
Prosecutions secured		4	
Meetings for midwives held		22	
Midwives present at meetings		148	
Licensed midwives visited in		116	municipalities
Unlicensed midwives visited in		64	municipalities

Birth registration has been investigated in 18 municipalities and on two Indian reservations. One hundred seventy visits have been made to registrars of vital statistics, health officers and public health nurses.

After-Care of Infantile Paralysis

A survey of the State to ascertain the number of cases suffering from the after effects of poliomyelitis now under state care or in need of such care reveals the fact that there are now 1,481 cases under observation by state nurses, 89 of whom are ready for discharge; 185 additional cases to be dropped for not cooperating with nurses in the treatment; 198 only in need of occasional visits for adjustment of apparatus; 1,001 requiring active supervision and 50 additional cases to be added as a result of the onset of the disease since the epidemic of 1916. Sixty-three clinics arranged for by state nurses have been held to which cases have been brought for consultation with the orthopedic surgeon. Individual patients have been visited and muscle treatment supervised or apparatus furnished and adjusted in 442 municipalities. Fifty-two patients have been admitted to hospitals for orthopedic operations and 475 pieces of apparatus furnished to this number of cripples suffering from the after effects of the disease.

Division of Communicable Diseases

Assistance has been furnished local municipalities in the control of the following outbreaks:

1. Influenza in 14 municipalities by supplying the nursing service of 14 additional nurses furnished through special appropriation supplied by the Governor.
2. Diphtheria in 6 municipalities.
3. Typhoid fever in 3 municipalities.
4. Scarlet fever in 3 municipalities.

NOTE.— A typhoid investigation is being made in four counties, Orange, Sullivan, Delaware and Ulster under the supervision of the Sanitary Supervisor of that district and assisted by one of the State Supervising Nurses of the Department.

Health surveys have been conducted by nurses in 5 municipalities in order to secure data for the Influenza Commission appointed by the Governor.

Health programs have been outlined by state nurses in 5 rural communities and recently appointed public health nurses have received instruction from state supervising nurses in 13 different instances.

Division of Public Health Education

During the year one state supervising nurse has been assigned full time to the work of public health education in rural communities. This nurse has addressed meetings in 174 different rural communities. Approximately 3,000 persons were actually reached in this way as shown from statistics kept of attendance at the various meetings. These meetings have been arranged through the local Farm Bureaus, Parent-Teachers' Associations, Civic Clubs, etc., and have frequently been the means of securing appropriations for the employment of public health nurses in localities in which meetings have been held.

Division of Tuberculosis

County tuberculosis surveys have been conducted in 31 counties and on 5 Indian reservations in the State. Clinics have been conducted in 45 municipalities with individual visits made to patients in 37 municipalities. Clinics have also been conducted on the Indian reservations. Thirteen county hospitals and 6 dispensaries and day camps have been visited. Courses of instruction have been given in tuberculosis at 3 nurses' training schools and at one school for public health nurses. Four tuberculosis conferences and institutes have been attended at which addresses were given by the nurse. Thirty-one county and 14 city tuberculosis nurses have been visited for instruction and for the purpose of standardizing their work. One hundred twenty-nine conferences have been held with representatives of state and local antituberculosis societies; superintendents of county tuberculosis hospitals; sanitary supervisors, county agents for dependent children; county superintendents of poor, boards of managers of county tuberculosis hospitals, health officers, welfare workers, county tuberculosis executive secretaries, public health nurses and representatives of nurses' alumni associations; county treasurers, probation officers; representatives of State Department of Education and medical school inspectors in regard to care of tuberculosis school children; chairmen of A. R. C. chapters and divisional directors; presidents of medical societies; superintendents of schools, nurses and Indian chiefs on Indian reservations in regard to surveys of reservations; press representatives regarding publicity in connection with tuberculosis surveys; insurance nurses; mayors and commissioners of charities.

Division of Venereal Diseases

The state supervising nurse and social service worker in the prevention and control of venereal diseases has visited 117 venereal disease clinics for the purpose of standardizing the work of the nurses in these clinics and the health officers and physicians in charge of such clinics have been interviewed. Ten visits have been made to locally employed social service workers to assist them in their work. Talks on venereal diseases have been given in six women's clubs, various girl scout organizations and similar groups of women and young girls. Many of these talks have been accompanied by the exhibition of moving picture films furnished by the Department.

The supervising nurse has also visited the state institutions in an effort to secure the taking of specimens for the Wassermann test and diagnosis of gonorrhea of the inmates contained therein. Similar visits have been made to the various reformatories. One local hospital devoted entirely to the treatment of venereal diseases has been visited.

Interviews have been held in 24 municipalities with representatives of local moral survey and police protective committees, charity organizations, women's institutes, civic clubs, parent-teachers' associations, Y. M and Y. W. C. A. associations, local chambers of commerce and industrial plants. Interviews have also been held with county and city probation officers and police matrons regarding treatment of venereal disease cases.

Conferences have been held with representatives of the State Department of Education regarding the work of Americanization as conducted by their supervision of immigrant education — in order to introduce in their program the work of venereal disease control. Similar conferences have also been held with the Education Department, Division of Medical School Inspection, in order to cooperate with them in educational work in the schools relative to venereal disease control. Interviews have been held with superintendents of nurses' training schools, with representatives from guilds for public health nursing, and school nurses relative to educational work in the prevention and control of venereal diseases.

As the activities of this Division increase and become much more diversified it is obvious that they should no longer be supervised by the secretary of the Administrative Division of the Department in addition to his other duties. Unquestionably much more efficient work could be accomplished in the Division if a full time properly qualified public health nurse, possessing the requisite experience in this important branch of public health work could be placed in the position of director of the Division. It is sincerely hoped that the Legislature at the coming session will make a suitable appropriation for the salary of such a director.

Very truly yours
JOHN A. SMITH
Secretary

February 17, 1920

DIVISION OF LABORATORIES AND RESEARCH

DIVISION OF LABORATORIES AND RESEARCH

HERMANN M. BIGGS, M.D., *Commissioner, State Department of Health, Albany, New York:*

SIR.— I have the honor to submit the following report of the work of the Division of Laboratories and Research for the year 1919.

During this year of readjustment the spirit of cooperation and enthusiasm which has been manifested by the staff has enabled the laboratory not only to carry on a greatly increased amount of routine work but also to advance the various activities interrupted by war conditions, and to undertake new problems. While the return of those on war leave has furthered this readjustment, but fifteen of the thirty-eight members who left the laboratory for the service have claimed their former positions. The higher salaries offered by other institutions and by the industries make it increasingly difficult to secure candidates with the training and experience necessary for the advancement of the laboratory work. The facility with which the staff handled this constant growth has been greatly enhanced, of course, by the improved working conditions and vastly greater conveniences afforded by the new laboratory building, which, while not completely equipped, was ready for occupancy the latter part of July.

The renewal of certain important activities which had been dropped on account of the war; the phenomenal growth of certain branches of the work — chiefly in connection with venereal diseases; and the development of new activities — notably the preparation of arsphenamine — account for the striking increase in the permanent staff which is necessary to carry on this work. All of this, in conjunction with the greatly increased cost of living, and the low salaries allowed technical workers in the state service, has necessitated a corresponding increase in the budget in order to safeguard the work.

One of the most important events of the year was the appointment of an Assistant Director to cooperate with the Director and the highly trained technical staff in coordinating the various activities of the laboratory throughout the State, serving the sanitary supervisors, health officers, and local laboratories. On account of his intimate knowledge of field conditions, the laboratory is especially fortunate in having Dr. Paul B. Brooks, formerly Acting Director of the Division of Communicable Diseases, as Assistant Director since July 1.

Antitoxin, Serum and Vaccine Laboratories

The work of the Antitoxin, Serum and Vaccine Laboratories has been developed considerably during the year 1919. The most important event was the removal to the new laboratory building on August 1. The unusual and unexpected prevalence of diphtheria in the State has greatly increased the demand for diphtheria antitoxin. The new development of serum therapy in meningitis and pneumonia has greatly stimulated both the routine work and research in connection with the preparation of antimeningococcus and antipneumococcus serums.

Coordination of Work

In the new laboratory building the different groups engaged in the preparation of diphtheria and tetanus antitoxins, antipneumococcus, antimeningococcus and antidysentery serums, and the different bacterial vaccines prepared from the typhoid, paratyphoid, dysentery and pertussis bacilli, occupy adjacent laboratory rooms. This affords an opportunity for the coordination of all work and improvement of the methods which was impossible in the old building. These improvements in the methods, due to proper equipment for the work and continued experience in it have necessitated complete revision of the standard methods and much time has been devoted to this revision of the work.

Diphtheria and Tetanus Antitoxins

The demand for diphtheria antitoxin has been unprecedented. It was due to the unexpected prevalence of diphtheria in the State. Considerable time is required to prepare a stock of antitoxin and this constant demand taxed the resources of the laboratory to the utmost. Starting in the fall of 1918, the distribution of antitoxin has continued to increase without any period of lessened demand such as ordinarily occurs at certain periods. A total of 178,511,000 units was distributed during 1919 as compared with 87,306,000 units in 1918. For one period of three to four months the demand for antitoxin increased from three to four hundred per centum above the normal demands of previous years for the same period. Nevertheless the emergency was met satisfactorily.

The demand for Schick outfits for testing the susceptibility of persons to diphtheria, and the mixture of diphtheria toxin and antitoxin which is used to immunize persons susceptible to diphtheria, has increased materially during 1919. One hundred and eighty-eight packages of toxin-antitoxin mixture were distributed in 1917, 442 in 1918 and 631 in 1919.

The demand for tetanus antitoxin varies from time to time, but it has not materially increased in the year 1919. Apparently the supply stations of the State have sufficient quantity to treat the cases as they develop.

Antipneumococcus and Antimeningococcus Serums

The State of New York was the first state to provide for the differential diagnosis of pneumonia, and the serum therapy of the disease in cases due to infection with pneumococci of Type I. This work depends upon bacterial diagnosis in the local laboratories which are qualified to do the work. In these centers the work is maintained by cooperation with the central laboratory in Albany. The development of this work in the State was considerably handicapped during the war, but in the Army it was greatly stimulated in all the camps in this country and abroad, so that since the Armistice and the return of the men in service there has been a greatly increased interest in the serum therapy of pneumonia. New centers for the bacterial diagnosis have been established at Auburn, Elmira, Poughkeepsie, Utica and Watertown.

Owing to technical difficulties in the preparation and standardization of antimeningococcus serums, this laboratory was forced to undertake a careful research into the type differentiation of the meningococci and methods of preparing and standardizing these serums, which have now been in progress two years. As a result of these investigations the antimeningococcus serums have been greatly improved, not only those prepared by the State, but also those of commercial manufacturers throughout the country.

Such satisfactory results have been obtained in the serum therapy of meningitis and pneumonia, both in this country and abroad, with the serums prepared by the laboratory at Albany that there has been a very urgent demand for the surplus that can be spared. In order to maintain these serums at a high standard it has been necessary to prepare a larger quantity than could possibly be used in the State. Furthermore, it has been necessary to prepare diagnostic serums which are prepared nowhere else. During the year requests were received from the Army, and from laboratories in thirty-three states, not including the state of New York; and from Canada, England, Italy, Denmark and Brazil. The distribution of these surplus serums which could not be used in the State, and which could not be obtained anywhere else outside the State, is, therefore, justified, and the moneys received in return for them — $3,669 — returning to the State Treasury compensates the State for undertaking this important work.

Bacterial Vaccines

In the preparation of the bacterial vaccines the work has not been enlarged in scope. There has been a large increase in the requests for combined typhoid-paratyphoid vaccine. Considerably smaller quantities of the vaccines as a whole were distributed owing to the lessened demand of physicians, and also to the fact that there was no war emergency such as existed in 1917 and 1918, when the preparation of vaccines was greatly increased.

Staff

During the war the staff of the Antitoxin, Serum and Vaccine Laboratories was not so greatly depleted as that of the Diagnostic Laboratories. Owing to the fact that this laboratory supplied the Army, it was necessary to maintain the personnel of this division of the laboratory staff. Nevertheless, it has been depleted by resignations from time to time owing to the fact that trained workers can secure higher salaries in other laboratories, especially those of the commercial manufacturers. Several important appointments to this staff, however, have been made since the Armistice and the discharge of men in service. Dr. Harold M. Lyall, Bacteriologist, and Dr. Charles Griffin, Veterinarian-Bacteriologist, both will be valuable members of the staff and contribute greatly to the development of the work.

During the year 1919, in addition to the investigations of pneumonia and meningitis serums noted above, research was devoted chiefly to the study of influenza and to the preparation of arsphenamine.

Influenza Vaccine

During the influenza epidemic of 1918 a large amount of vaccine was prepared and distributed throughout the State. From a careful investigation during 1919 of the results obtained in state institutions it is evident that vaccination with this vaccine possesses no practical value in the prevention of the disease. The laboratory was forced to prepare and distribute it on account of the general demand of physicians. There was no scientific basis for its use. It was distributed with the understanding that the use of it was an experiment, although a harmless one, because it was well known that the vaccine was not a dangerous one to use.

Arsphenamine

It is unfortunate that owing to the already overcrowded condition of the new laboratory it has been impossible to transfer the work connected with the preparation of arsphenamine from the old building, notwithstanding its entirely inadequate facilities for this work. The conditions there are a menace not only to the staff engaged in the work, but to the community, and on this account requests for additional buildings were made in the budget. The work has been greatly delayed on account of the lack of facilities and the impossibility of securing equipment from manufacturers. In fact, trade conditions have handicapped this work and all work of the laboratory. Mr. P. A. Kober, in charge of this work, resigned to become Research Chemist for E. R. Squibb & Sons at a greatly increased salary. The responsibilities of the work have been taken up by Mr. Walter S. Davis, with the assistance of Mr. David E. Roelky, formerly an expert analytical chemist for New York City. In view of the conditions, they have made astonishing progress with the work, and the product they have prepared has satisfactorily met the federal standards which are required by the Federal Trade Commission, under which Commission the laborartory is licensed to manufacture arsphenamine. Although only small amounts have been prepared, the quality is in many respects superior to any that can be obtained.

Farm

Conditions at the farm are most unsatisfactory on account of the old buildings and the fact that the location is inaccessible. It has been thought unwise to construct the new stables allowed by the Legislature on account of the high prices and the possibility of securing a farm more accessible to the laboratory. Nevertheless, in four years the farm has been greatly improved. Approximately forty horses are stabled there and used in the preparation of serums and antitoxins. The breeding of a large number of the smaller laboratory animals has progressed most satisfactorily. The crops produced in the year have been roughly estimated to exceed $8,000 in value. All this work has been done with a limited staff of eight men, and they deserve great credit — especially when the fact is taken into account that the federal requirements for commercial manufacturers in the care of horses that are used in the preparation of antitoxins and serums provide that there shall be one stableman for every seven horses.

Diagnostic Laboratories

RUTH GILBERT

The duties and responsibilities of the Diagnostic Laboratories' staff have been greatly increased during the year 1919. This is due chiefly to the greatly increased interest in the diagnosis and treatment of venereal disease throughout the State. Public health activities everywhere have been greatly augmented since the close of the war and with the return of the soldiers. All men in service have learned the importance of preventive medicine. There are now nearly one thousand public health nurses in the State. Local laboratories which are subject to inspection and approval have made demands upon the Central Laboratory in Albany, requiring careful inspection and revision of the standards of work.

Diphtheria

Owing to the prevalence of diphtheria in certain districts of the State, the examinations of throat cultures for diphtheria bacilli have shown a marked increase, 21,773 having been made in 1918 as compared with 35,954 in 1919. Many of these throat cultures have been sent from schools and institutions to determine the presence of carriers.

Tuberculosis

The number of examinations for the tubercle bacillus in 1917 was 5,915; in 1918, 5,896; and in 1919, 7,186. Despite the increase in 1919, this is a small number of examinations, considering the population of the State; but many examinations for tuberculosis are made in the local laboratories or in the institutions. In order to perfect this branch of the work in the laboratory at Albany, two examinations of each specimen are now made, each examination being made independently by different workers. This procedure has greatly increased the efficiency of the work, but it has also required more time and a larger staff. When a physician thinks a specimen of spinal fluid, pleural fluid or urine may contain tubercle bacilli, guinea pigs are inoculated with the specimen. This requires much time, but the physicians appear to appreciate this confirmation of the examinations.

Enteric Diseases

The number of examinations for the diagnosis of the enteric diseases — typhoid fever, paratyphoid fever, and dysentery — has not increased, but there have been some important changes made in the routine procedure of examining the specimens. Since the clinical signs of typhoid and paratyphoid fever are so similar, it was thought wise to test all specimens of blood sent for the agglutination test for typhoid, for paratyphoid A and paratyphoid B also. This change in method causes additional work but will probably be of assistance to the physicians. This has not been proven, since too few examinations have been made to definitely establish its value. It has been shown from the feces work, however, that occasionally paratyphoid cultures are isolated from specimens sent for the routine examination for typhoid.

Venereal Diseases

The diagnosis of the venereal diseases has been so greatly developed during the last year that it deserves special consideration. The specimens from cases of gonorrhea and syphilis have outstripped all the other work of the laboratory. This is due to the campaign throughout all the states of the Union, and in the Army and Navy, to secure a prompt diagnosis and treatment of all these infections, in order to safeguard against the spread of the diseases in the civil population.

The complement-fixation test in the diagnosis of gonorrhea was abandoned at the Albany laboratory after a careful study of the results of 6,024 tests, although it was temporarily continued at the Branch Laboratory in New York City. Although, if reliable, the complement-fixation test would be very essential to the prevention of the spread of gonorrhea, in the present methods of carrying out the test there is insufficient evidence that it is a reliable diagnostic aid in detecting latent gonorrhea; therefore, the result of such a test may be misleading and may foster a false sense of security.

It is interesting to note that of the 6,024 specimens tested, 4,773 were received with no information of any sort on the history blanks. It is hoped that physicians who send in specimens will gradually come to realize that the laboratory diagnosis of a specimen and the clinical history of the patient should be carefully compared.

The microscopic examinations of specimens of the discharges from suspected cases of gonorrhea increased from 779 in 1918 to 2,113 in 1919.

The complement-fixation test for the diagnosis of syphilis increased from 30,749 examinations in 1918 to 68,359 in 1919, more than 100 per centum; that is, 16,232 specimens as compared with 30,925.

Owing to war conditions in 1918, it was at times impossible to get a sufficient number of guinea pigs and it was necessary to curtail some of the work; but during 1919 no difficulties were encountered. Special investigations of the methods used in the test are being made by the staff with a view of simplifying and improving the test. It is hoped that the laboratory will soon be able to supply the local laboratories of the State with all the reagents, after they have been very carefully standardized. This will be of the greatest value to physicians, who will then get similar and comparable reports from the different laboratories of the State.

Pneumonia

The examinations for the bacterial diagnosis of pneumonia have not increased materially. This is due to the fact that last year, owing to the epidemic of influenza, a very large number of examinations were made.

Miscellaneous Examinations The number of specimens sent for miscellaneous examinations more than doubled since 1918, when they numbered 631. In 1919, 1,280 were received. This branch of the diagnostic work is the most exacting of all, in requiring the most experienced workers and in requiring so much time for each examination. It is, nevertheless, one of the most valuable branches of the work, not only for the physicians of the State, who can turn to the laboratory in any emergency, but also for the laboratory in giving a broader training in bacteriological procedure.

Cooperation with Local Laboratories A special effort has been made during 1919 to cooperate with approved laboratories, or laboratories that are being established. Antigen, amboceptor, culture media and outfits, and occasionally glassware and apparatus, are loaned or supplied to be used in emergencies or until supplies that have been ordered can be secured. Physicians are saved the inconvenience that would be caused by the closing of the laboratory or the delay in sending specimens to Albany in case of an epidemic.

In several instances it has been necessary to send laboratory workers to help in these laboratories. Miss B. Eleanor Easton was sent to Kingston in the case of a diphtheria epidemic, and she opened the Ulster County Laboratory to make the emergency examinations. The health authorities then made arrangements to keep the laboratory open permanently and secured the services of Miss Easton. Dr. W. E. Youland, Jr., with an assistant, Miss Elizabeth Knauf, went to Olean during an epidemic of diphtheria to cooperate with Dr. Garen. Miss Knauf later was sent to Belmont to substitute during the illness of Miss Gladys Mead, the Bacteriologist of the Allegany County Laboratory. The local laboratories seem to appreciate this cooperation of the State Laboratory. It is a very important function of the State Laboratory to furnish workers for the smaller institutions, since they have learned the methods that can be used in handling a large amount of routine work, and, as a rule, give better service than needed in the diagnostic department, since, besides the workers who are sent to supply in approved laboratories, many bacteriologists have secured permanent positions in these laboratories.

Approved Laboratories

The directors and workers from other laboratories have come to Albany to perfect themselves in the technical procedures that have been standardized. This involves considerable interruption of the work, but there is no more important service which the laboratory can render the State than that of improving the work in the local laboratories. Workers from the city laboratories at Rochester, Niagara Falls and Poughkeepsie, from the Mary McClellan Hospital at Cambridge and from other approved laboratories have come to the laboratory during the year.

Realizing the importance of this work, a renewed effort was made in 1919 to require higher and more uniform standards in all the approved laboratories. This has been accomplished by inspecting all of the approved laboratories. As a result of the information obtained from these inspections the standards required of these laboratories, both in the technical procedure and in the keeping of their records, have been completely revised. If the appropriations permit, all the approved laboratories ought to be inspected each year. The laboratories visited during 1919 are as follows: Laboratory of Dr. David Wilson, Amsterdam; Cayuga County Laboratory, Auburn; Genesee County Laboratory, Batavia; Allegany County Hygienic Laboratory, Belmont; Kilmer Pathological Laboratory and the Nelson and Lauder Laboratory, Binghamton; City Department of Health Laboratory, Buffalo; Ontario County Laboratory, Canandaigua; Clayton Laboratory, Clayton; Clifton Springs Sanatarium Laboratory, Clifton Springs; Steuben County Hygienic Laboratory, Corning; Dunkirk City Laboratory, Dunkirk; Elmira Laboratory, Elmira; Laboratory of the Endicott-Johnson Company, Endicott; Livingston County Laboratory, Geneseo; Jamestown Laboratory, Jamestown; Ulster County Laboratory, Kingston; Cappus Laboratories, Mamaroneck; City Department of Health Laboratory, Middletown; City Department of Health Laboratory, Newburgh; von Wedel Laboratory, New Rochelle; City Department of Health Laboratory, Niagara Falls; City Department of Health Laboratory, Olean; Madison County Bacteriological Laboratory, Oneida; Hudson River State Hospital Laboratory, Vassar Brothers Hospital Laboratory and the City Department of Health

Laboratory, Poughkeepsie; Monroe County Bacteriological Laboratory, City Department of Health Laboratory, Laboratories of the Rochester Homeopathic Hospital, Hahnemann Hospital and General Hospital, and the Laboratories of Dr. Charles O. Boswell and Dr. G. W. O'Grady, Rochester; City Department of Health Laboratory, Schenectady; Onondaga County Laboratory, Syracuse; City Department of Health Laboratory, Troy; Isabel M. Meader Laboratory and Calkins and Farmer Laboratory, Watertown; Yonkers City Laboratory, Yonkers.

Records

So much depends upon the accuracy with which the records of diagnostic examinations are kept in the laboratory and the reports sent to physicians that careful attention has been paid to all clerical errors. Some of these are due to mistakes of the laboratory staff. By a careful system of double checking in all this work the liability of error on this account has been reduced to a minimum, but it is quite impossible to eliminate it altogether. By far the greater majority of the errors are due to incomplete or inaccurate data supplied by physicians who send specimens for examination. Whenever these errors occur letters are sent to the physicians stating the facts plainly in each case and a means is suggested of preventing a similar occurrence in the future. Whenever the mistake is likely to be made by other physicians a note in the Health News is published warning against the chances of error. The laboratory is forced to rely upon the accuracy of physicians. Records are frequently inaccurate. For example, according to dates on the information blanks, specimens are received in incredibly short time, or even before they were taken. Names of patients are so illegibly written that they can not be deciphered. There is no question, however, but that the physicians of the State are much more careful each year to give complete and accurate information, and on the proper blanks. The accuracy of the work of the laboratory depends very largely upon their cooperation and appreciation of the laboratory problem in reporting the results of the examination so that they will be most helpful to the physician in making the clinical diagnosis.

Sanitary Examination of Water Supplies

LEONARD M. WACHTER

The number of examinations of samples of water from the water supply of the State has diminished slightly during the year 1919 owing to the fact that during and after the war it has been difficult to secure an adequate staff to carry on the necessary field inspections of the sources of water supply. No laboratory examinations of samples of water are made, the sources of which have not been fully inspected.

Health officers send very few samples of water for examination, although for nearly five years the circulars have stated distinctly that they can have any samples of water examined if they will take them and inspect the sources, reporting the results of their inspection on the appropriate cards. In fact, any citizen can have samples from his well examined if he can induce the health officer to make the necessary inspection of the sources, and send samples to the laboratory.

Special examinations are constantly being made by the analytical chemists in addition to their routine examinations. They have also passed upon many of the processes employed by manufacturers throughout the State in the disinfection of mattresses, upholstered box-springs and metal bed springs.

Preparation of Glassware and Media

The preparation and sterilization of glassware and media for all branches of the laboratory work have been greatly handicapped owing to the unsatisfactory conditions in the old laboratory buildings; and now that the laboratory has moved into the new building, conditions have been even more difficult. Autoclaves and the sterilizing equipment have not been installed on account of the difficulty of getting the manufacturers to complete their work according to contract. The work has been carried on with the old equipment and with much loss of time and energy. Owing to faulty sterilization much of the work has had to be repeated.

This branch of the work has been very carefully organized and it is most valuable in the training of new workers. All untrained laboratory workers are assigned to this branch of the work before being transferred to the diagnostic laboratories. Workers usually progress from the preparation of media and glassware to the diagnostic work, and then to the antitoxin, serum and vaccine laboratories, or special research problems.

Many of the local laboratories secure special supplies of media for their work, and this is an important service which the Albany laboratory can render them; in fact, 17,560 c.c. of media were distributed in 1919, as compared with 450 c.c in 1918.

Office

ILA M. DUTTON

The growth of all branches of the laboratory work has been reflected in the larger office staff required to purchase material, report the results of examinations and tabulate and file the increasing records and correspondence. From a staff of four in 1914, the office has grown until there are now twenty-five members. The office staff has never been adequate for the work. Owing to pressure during epidemics, or outbreaks of infectious disease, and the necessity of getting the reports sent promptly to physicians, emergencies are continually arising which block all the work. It is important, essential, that this staff be able to carry the routine easily, with free time for special work or for emergencies. There is, perhaps, no more important group than that devoted to the purchase of laboratory equipment and supplies, and with the unprecedented growth in the laboratory work it has been extremely difficult to anticipate the demands of the various groups and provide for them satisfactorily. The fact that there is not sufficient storage space in the new building, and that the stock room is still incomplete is a great drawback.

The development of the office has been handicapped by the impossibility of securing secretaries fitted by training or experience to develop the various groups and weld them into a harmonious unit. Owing to the war and the ensuing unsettled industrial situation, special Civil Service examinations have not produced candidates. Correspondence with the colleges and business schools shows that the demand for trained men and women is far in excess of the supply. The salaries which have been provided for this important division of the laboratory have not been attractive, it is true, and it is hoped that a larger appropriation may be secured to further its development.

The Branch Laboratory, New York City

DR. W. C. NOBLE

During the war the Branch Laboratory in New York City under Dr. W. C. Noble, was called upon to serve many of the military and naval camps nearby. Since the Armistice many of these camps have been abandoned, but throughout the year 1919 this work has continued, although much abated. The total number of examinations, including those for the military and naval camps, made at the Branch Laboratory increased from 18,468 in 1918 to 27,071 during this year.

Owing to a misunderstanding of the purpose and scope of the new law governing the sterilization of mattresses, the Department issued to manufacturers approvals of processes which did not give complete and reliable disinfection. Proof of the facts in each instance was necessary in order to withdraw such approvals. Forty-one manufacturing plants were inspected and tested. Practically all of this work was done by the Branch Laboratory. As a result of these tests the fact that all of the plants using formaldehyde failed to disinfect was so clearly established that the withdrawal of these approvals was justified beyond any legal question.

Library

MARY WILLIAMS

The growth of the library during the past year has not been noteworthy. The available space for books and journals has been limited; time and attention that could have been employed to better advantage have been spent in shifting the material several times and adjusting it for temporary use. During the greater part of the past year there has been no reading room for the use of the staff, so that it has been difficult to arrange for the use of the books and journals and yet insure their safe return to the shelves. However, the current journals have appeared regularly, and the routine work has been kept up as well as possible considering the unsettled conditions. Much useful indexing has been done, and a systematic effort has been made to increase the library collection of reprints and pamphlets. The value of this work will be apparent as soon as the scattered material can be brought together and arranged permanently in place. The new library room promises space and opportunity for increased usefulness. The really excellent collection of literature is one of the most valuable possessions of the laboratory.

The regular seminar meetings of the staff have been held twice a month. At these meetings the scientific workers report noteworthy facts and events from their respective departments; current literature is reviewed, and research work is summarized.

Research Activities

Research problems concerning the potency of a polyvalent antimeningococcus serum produced with four representative strains, as compared with a similar serum produced with sixty strains; and the value of the gonococcus complement-fixation test, based upon the results of 6,024 tests with gonococcus antigen, were completed during 1919.

Apart from the special investigations already mentioned, research has been directed especially to the study of phagocytosis with a view of determining the action of the different bacterial poisons on the tissues of the body; the study of the production of diphtheria toxin; and the study of the antigens which are used in the complement-fixation test. These are all problems of immediate practical importance in the work of the laboratory.

Other investigations requiring considerable time — among which was that conducted to determine the source of food poisoning which caused the death of five persons in the town of Fine, New York — have been carried on by the laboratory at the urgent request of various officials in the field, and in cooperation with other state departments.

A special investigation of the protective value of pneumococcus vaccination against pneumonia has been carried on by the United States Public Health Service in the New York State hospitals. All of this work was done by the Albany and Branch Laboratories.

The Director has also attended the meetings of the various medical and bacteriological societies held during the year at Syracuse, Atlantic City, Saratoga Springs, New Orleans, Washington and Baltimore; and has presented the results of some of the laboratory researches before them as well as before the Canadian Public Health Association, at Toronto. He also presided at the meeting of the sanitary supervisors, and the members of the staffs of the approved laboratories of the State, which was held for the first time at this laboratory on November 12.

The New Laboratory Building

In the new building, the organization and administration of the laboratory, as well as its standard procedures, have been the subject of study by representative medical men from Central and South America who, under the auspices of the International Health Board of the Rockefeller Institute, are fitting themselves to establish such service in their own countries. Information regarding the organization and the scope and extent of the work has also been given to the French government as an aid in building up the medical service of that country.

The reputation of the new laboratory building, on account of its exceptional equipment, has brought many visitors from many states of the Union, and from foreign countries. Great credit is due the State Architect, Mr. Lewis N. Pilcher, and his able assistants, Mr. T. M. Newton, Mr. G. B. Nichols and Mr. Ralph C. Taggart, who have given the complicated arrangement of the equipment the most careful study, and especially in view of the fact that all of their work has stood the practical test. Nevertheless, since the plans and specifications for the new building were drawn the laboratory staff has tripled in number and the work quadrupled. It is now utterly inadequate in size, although perfectly equipped. New buildings are necessary to provide sufficient space.

During the greater part of the past year matters concerned with the new laboratory have constantly required attention — the completion of the building, the transference of the work, and the adjustment of the various groups to the new quarters. The task of correlating the work, the numberless problems connected with the smooth functionating of a great organization in a new building has proceeded slowly, and is far from completion at present. Unsettled business conditions have caused unavoidable delay in obtaining equipment and supplies; this delay, in turn, has prevented certain contractors from finishing their work at the time agreed upon; consequently, when the staff moved in, the place was not really ready for them, and apparently will not be completely equipped for some time. A succession of makeshifts and temporary adjustments — time-consuming, expensive and most annoying — have been necessary in order to keep the technical activities going regularly.

The responsibilities incident to the new laboratory and the development of work have increased in geometrical proportion. Additional persons are necessary to care for the building and the expensive equipment. Several entirely new activities have been started which require high-grade assistants and a certain amount of supervision. The management and care of the necessarily large laboratory staff — their appointment, training and physical well being — is a problem in itself, apart from the routine procedures connected with the work.

It is indeed amazing that despite all the encouraging support which the Legislature and the Governor have given the laboratory, it is scarcely possible to meet the steadily increasing demands of physicians, health officers and State institutions. One might reasonably expect that after four years of such phenomenal development a limit would be reached, which would afford the opportunity of perfecting many branches of service that have been started and are only partially developed. But quite the contrary is true: during the war the work was greatly augmented; even now, since the war, the increase continues; and, with the worldwide impetus which the war has given all phases of preventive medicine and the public interest in industrial medicine and the appointment of nearly a thousand public health nurses during the last two or three years, there is no prospect of the laboratory reaching any limit to its growth in the near future — that is, if the laboratory is to do the work that it is called upon to do and it should do.

Respectfully submitted
AUGUSTUS WADSWORTH

February 25, 1920

DISTRIBUTION OF SERUMS, VACCINES AND OTHER CURATIVE AND PREVENTIVE PREPARATIONS AND MISCELLANEOUS SUPPLIES

	SERUMS				VACCINES										ARSPHENAMINE												
	Antipneumococcus (50 c. c. bottles)	Antimeningococcus (20 c. c. bottles)	Antidysentery (20 c. c. bottles)	Poliomyelitis*	Typhoid	Paratyphoid	Typhoid-paratyphoid	Dysentery	Pertussis	Smallpox — (10 doses per bottle)	Rabies	Autogenous	Pneumococcus	Influenza	1.0 gram	0.6 gram	0.4 gram	Tuberculin	Ophthalmia Neonatorum Outfits	Schick outfits	Diphtheria toxin-antitoxin mixture	Dysentery toxin-antitoxin mixture	Standard and diagnostic serums, toxin, etc.	Normal horse serum	Media (bottles)	Media (tubes)	Cultures
1914, number of packages..	......	......	....	..	1,457	....	......	..	......	......	......	..	....	......	......	......	......	..	24,650	....	....	....	....	..	......	......	....
1915, number of packages..	16	30	....	..	5,656	....	......	..	211	......	......	1	....	......	......	......	......	..	43,307	....	....	....	....	..	......	......	....
1916, number of packages..	433	426	22	65	6,058	106	......	23	4,127	515	10	4	....	......	......	......	......	6	30,798	4	....	....	....	..	......	......	....
1917, number of packages .	2,253	1,963	614	..	7,690	739	920	64	4,521	3,951	215	6	....	......	......	......	......	36	27,077	138	188	[1]188	[2]774	..	[3]438	1,016	350
1918, number of packages..	8,330	1,544	814	..	3,663	273	2,397	10	5,970	355	1,623	..	203	8,245	......	510	489	36	27,508	67	442	....	[4]638	..	[5]21	1,281	326
1919, number of packages..	806	886	77	..	2,307	20	2,421	8	3,005	7	896	..	3	204	3,315	7,146	5,772	24	30,074	115	631	....	[6]781	37	[7]1,439	127	520

[1] (455 c. c.) [2] (19,736 c. c.) [3] (110,667 c. c.) [4] (244,292 c. c.) [5] (450 c. c.) [6] (51,430 c. c.) [7] (17,560 c. c.)

* Poliomyelitis serum used in the treatment of poliomyelitis and the vaccine used against smallpox have been distributed only to meet special emergencies. Smallpox vaccine is not yet ready for general distribution. Supplies of the pure vaccine are sent to institutions or schools where it will be used immediately in order to secure practical tests of the variations in its potency, which cannot as yet apparently be controlled in the manufacture on a large scale. This vaccine is the pure vaccine prepared by the methods of Dr. Noguchi of the Rockefeller Institute.

DISTRIBUTION OF DIPHTHERIA AND TETANUS ANTITOXINS AND RECORD OF ADMINISTRATION

YEAR	RECORD OF DISTRIBUTION						RECORD OF ADMINISTRATION BASED ON REPORTS FROM HEALTH OFFICERS AND PHYSICIANS									
	PACKAGES DISTRIBUTED						IMMUNIZATIONS REPORTED		CASES TREATED AND REPORTED		RECOVERIES IN CASES TREATED		DEATHS IN CASES TREATED		CASES IN WHICH DIAGNOSIS WAS INDETERMINATE YET TREATED WITH ANTITOXIN	
	Total number of packages	1,000 units* packages	3,000 units packages	6,000 units packages	Total number of units antitoxin distributed†	Average number of units per c.c.	Total number	Total number of units used	Total number	Total number of units used	Total number	Total number of units used	Total number	Total number of units used	Total number	Total number of units used
DIPHTHERIA ANTITOXIN																
1902	...	...	...	...	9,828,000	300	...	...	...	...	...	...	...	...	...	...
1903	...	...	...	...	21,181,500	325	...	...	...	...	...	...	...	...	...	...
1904	...	...	...	...	24,561,000	375	...	...	...	...	...	...	...	...	...	...
1905	...	...	...	...	24,462,000	350	...	...	...	...	...	...	...	...	...	...
1906	...	...	...	...	26,681,000	350	...	...	...	...	...	...	...	...	...	...
1907	...	...	...	...	35,443,500	450	...	...	...	...	...	...	...	...	...	...
1908	...	...	...	...	38,203,500	350	...	...	...	...	...	...	...	...	...	...
1909	...	...	...	...	36,643,500	370	492	2,000,000	1,369	11,250,000	1,235	10,000,000	134	1,250,000	42	618,750
1910	...	...	...	...	55,374,000	530	3,920	5,000,000	1,863	13,500,000	1,700	11,700,000	163	1,800,000	35	700,000
1911	...	...	...	...	65,563,500	550	3,921	9,530,350	2,566	18,317,650	2,354	15,813,650	212	2,504,000	52	174,500
1912	...	...	...	...	61,117,500	550	5,024	7,574,095	2,535	20,996,200	2,345	18,779,700	190	2,216,500	150	450,000
1913	...	...	...	...	66,639,000	600	3,055	6,134,400	1,943	13,612,000	1,766	11,892,600	177	1,719,400	...	474,000
1914	26,461	...	...	...	78,966,000	‡552	1,994	3,721,950	2,149	14,706,050	1,982	12,693,950	167	2,012,100	285	1,473,500
1915	29,470	...	...	...	83,473,500	791	1,966	4,258,350	2,687	15,225,250	2,370	12,201,750	317	3,023,500	74	251,400
1916	21,171	...	...	...	89,704,500	1,040	1,920	4,556,500	2,129	17,150,200	1,964	15,095,800	165	2,054,400	25	87,500
1917	28,587	...	...	...	101,535,000	896	1,393	1,650,700	1,483	12,096,200	1,372	10,809,100	111	1,287,100	24	82,500
1918	27,031	...	...	...	87,306,000	850	767	876,662	1,188	9,843,300	1,058	8,702,400	130	1,140,900	91	352,000
1919	52,281	14,582	20,945	16,849	178,511,000	874.65	1,170	1,518,500	1,288	11,312,500	1,207	10,195,000	81	1,117,500	209	1,284,300
TETANUS ANTITOXIN		1,500 units	10,000 units	20,000 units												
1909	...	...	...	...	6,369,500	...	...	819,950	15	...	5	...	10	687,000	...	...
1910	...	...	...	...	14,482,500	...	...	326,400	14	...	5	...	9	1,950,500	...	...
1911	...	...	...	...	12,142,500	...	...	587,400	23	...	7	...	16	1,474,000	...	...
1912	...	...	...	...	12,762,000	...	...	791,450	31	...	9	...	22	1,413,000	...	...
1913	...	...	...	...	11,719,500	...	...	740,400	25	...	8	...	17	1,328,000	...	...

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* Before May, 1917, packages containing 1,500 units diphtheria antitoxin were distributed for immunisation. † From 1914 for actual number of units distributed, add 20 per cent, representing excess contained in each package over number of units given on label. ‡ From this date all antitoxin accurately standardised.

DISTRIBUTION OF DIPHTHERIA AND TETANUS ANTITOXINS AND RECORD OF ADMINISTRATION — (*Continued*)

YEAR	RECORD OF DISTRIBUTION						RECORD OF ADMINISTRATION BASED ON REPORTS FROM HEALTH OFFICERS AND PHYSICIANS									
	PACKAGES DISTRIBUTED						IMMUNIZATIONS REPORTED		CASES TREATED AND REPORTED		RECOVERIES IN CASES TREATED		DEATHS IN CASES TREATED		CASES IN WHICH DIAGNOSIS WAS INDETERMINATE YET TREATED WITH ANTITOXIN	
	Total number of packages	1,000 units* packages	3,000 units packages	6,000 units packages	Total number of units antitoxin distributed†	Average number of units per c.c.	Total number	Total number of units used	Total number	Total number of units used	Total number	Total number of units used	Total number	Total number of units used	Total number	Total number of units used
1914	7,005	....	....	....	24,075,000	....	699	1,762,200	15	....	2	....	13	153,500	......	....
1915‡	8,664	....	....	....	42,142,500	‡1,024	410	823,800	16	390,000	2	16,000	14	374,000	......	....
1916	8,842	....	....	....	34,959,000	971	778	1,275,450	66	1,656,100	33	727,100	33	929,000	......	....
1917	8,616	....	....	....	39,441,000	1,056.9	558	1,202,250	28	439,800	24	293,500	4	146,300	......	....
1918	8,063	....	....	....	41,221,500	845	379	786,890	11	638,500	8	554,500	3	84,000	......	....
1919	10,869	8,008	1,939	842	48,362,000	850.28	503	1,067,900	14	1,378,500	4	993,000	10	385,500	......	....

* Before May, 1917, packages containing 1,500 units diphtheria antitoxin were distributed for immunization. † From 1914 for actual number of units distributed, add 20 per cent, representing excess contained in each package over number of units given on label. ‡ From this date all antitoxin accurately standardised.

DISTRIBUTION OF DIAGNOSTIC OUTFITS

	Diphtheria culture outfits and tubes	Tuberculosis sputum outfits	Typhoid fever Widal outfits	Typhoid fever feces outfits	Syphilis-blood serum outfits	Gonorrhea smear outfits	Malaria smear outfits	Miscellaneous outfits	Total
1913	*	*	*	*	*	*	*	*	15,984
1914	*	*	*	*	*	*	*	*	39,396
1915	41,419	8,391	6,666	3,181	9,103	1,138	356	2,108	72,362
1916	49,331	9,096	†8,184	4,819	15,039	2,884	1,267	3,555	94,175
1917	59,204	9,866	6,269	3,448	20,566	2,095	971	4,217	106,636
1918	53,791	9,300	4,290	1,931	23,146	3,038	824	3,839	100,159
1919	91,150	13,230	4,969	3,435	43,929	5,822	348	6,226	169,109

* No record. † This exceptional increase is due to the paratyphoid epidemic among the troops returning to the State from the Mexican border.

DIAGNOSTIC EXAMINATIONS

Central Laboratory, Albany, N. Y.

	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Diphtheria:												
Culture examinations:												
Positive	741	755	1,822	1,761	1,322	2,909	4,242	7,135	7,082	7,625	6,483	12,627
Negative	735	1,014	4,580	5,573	4,298	6,127	8,704	11,330	11,795	17,613	11,038	18,085
Unsatisfactory	121	201	...	...	...	...	917	804	1,577	1,569	1,652	2,986
Re-examinations	...	...	...	...	...	...	...	4,824	4,813	4,892	2,600	2,256
Virulence tests	...	...	...	...	...	...	...	37	221	69	96	353
Special epidemics — total (Poughkeepsie)	...	...	...	...	...	...	...	...	107	...	...	...
Total	**1,597**	**1,970**	**6,402**	**7,334**	**5,620**	**9,036**	**13,863**	**24,130**	**25,595**	**31,768**	**21,869**	**36,307**
Tuberculosis:												
Sputum examinations:												
Positive	329	526	584	658	793	691	875	1,117	1,370	1,423	1,402	1,622
Negative	498	1,245	1,277	1,755	1,966	2,192	2,318	2,198	3,919	4,464	4,460	5,549
Unsatisfactory	15	5	...	...	...	...	...	62	36	28	34	15
Total	**842**	**1,776**	**1,861**	**2,413**	**2,759**	**2,883**	**3,193**	**3,377**	**5,325**	**5,915**	**5,896**	**7,186**
Enteric diseases:												
Blood agglutination tests:												
Typhoid fever:												
Positive	147	92	254	288	297	350	435	610	965	937	865	631
Negative	282	179	378	441	552	665	896	970	1,966	1,863	1,598	1,375
Unsatisfactory	70	87	...	...	...	...	...	208	106	233	414	307
Total	**499**	**358**	**632**	**729**	**849**	**1,015**	**1,331**	**1,788**	**3,037**	**3,033**	**2,877**	**2,313**
Paratyphoid fever:												
Positive	...	...	...	...	...	...	...	...	...	1-A* 2-B* 43-A&B*	2-A 8-B 5-A&B	4-A 3-B 5-A&B
Negative	...	...	...	...	...	...	...	...	...	11*	70	80
Unsatisfactory	...	...	...	...	...	...	...	...	...	4*	1	...
Total	...	...	...	...	...	...	...	...	...	**61***	**86**	**92**
Dysentery:												
Positive	...	...	...	...	...	...	...	...	...	1*	...	6
Negative	...	...	...	...	...	...	...	...	...	1*	...	13
Unsatisfactory	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	...	...	...	...	...	...	**2***	...	**19**
Special epidemics — total (Poughkeepsie and 2d Regiment)	...	...	...	...	...	...	...	...	3,174	...	...	...
Total	**499**	**358**	**632**	**729**	**849**	**1,015**	**1,331**	**1,788**	**6,211**	**3,097**	**2,963**	**2,424†**

DIAGNOSTIC EXAMINATIONS — (*Continued*)

Central Laboratory — (*Continued*)

	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Blood cultures:												
Special epidemics — total (Poughkeepsie and 2d Regiment)									60			
Examination, intestinal discharges:												
Typhoid fever:												
Positive								15	81	124	92	91
Negative								149	687	606	553	1,153
Unsatisfactory								20	4	2	27	77
Total								184	772	732	672	1,321
Paratyphoid fever:												
Positive										6–B* 90*	5–A 7–B 24	6–A
Negative											400	
Unsatisfactory												
Total										96*	436	6
Dysentery:												
Positive										6*	14	14
Negative										93*	64	
Unsatisfactory												
Total										99*	78	14
Special epidemics — total (Poughkeepsie and 2d Regiment)									1,567			
Total								184	2,339	927	1,186	1,341
Syphilis:												
Complement fixation test:												
Positive								1,212	2,474	3,378	3,704	5,392
Negative								3,378	5,854	9,002	9,619	14,748
Unsatisfactory								219	454	706	921	976
Doubtful								847	1,249	1,821	1,988	9,809
Re-examinations								6,524	11,304	17,292	14,517	37,434
Total								12,180	21,335	32,199	30,749	68,359
Gonorrhea:												
Complement fixation test:												
Positive								1	55	150	199	
Negative								22	836	1,909	1,105	
Unsatisfactory								24	64	244	122	
Doubtful								7	293	626	248	
Re-examinations								5	2,056	2,414	999	
Total								59	3,304	5,343	2,673	

Microscopical examinations:												
Positive								17	128	100	180	666
Negative								76	868	241	553	1,200
Unsatisfactory								5	148	53	46	247
Total								98	1,144	394	779	
Total								157	4,448	5,737	3,452	2,113
Pneumonia.												
Pneumococcus type differentiation												
Sputum:												
Positive:												
Type I										127	126	36
Type II										38	25	17
Type II atypical										26	6	
Type III										70	51	43
Type IV										146	96	103
Combined											19	
Types I and IV												3
Types III and IV												1
Negative										137	326	290
Unsatisfactory										27	29	8
Supplementary reports										6	2	232
Total								17	174	577	680	733
Urine:												
Negative										4		
Spinal fluid:												
Positive, Type IV										1		
Negative										1		
Total										2		
Total								17	174	583	680	733
Influenza:												
Positive											11	39
Negative											121	38
Unsatisfactory												
Doubtful											9	
Total											141	77
Chemical examinations —												
Special problems											148	102
Other diseases									541			
Special epidemics — total (Poughkeepsie)									87			
Total							91	151	628	740	631	1,280
Total	2,938	4,104	8,893	10,476	9,228	12,934	18,478	41,984	66,115	80,965	67,715	119,922

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* Represents examinations from July 1, 1917.

† Since August, 1919, all specimens of blood have been tested with cultures of B. paratyphosus A and B, besides B. typhosus.

DIAGNOSTIC EXAMINATIONS — (*Continued*)

Branch Laboratory, New York City †

	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Diphtheria:												
Culture examinations:												
Positive	......	......	......	......	......	......	......	1,387	902	824	680	1,409
Negative	......	......	......	......	......	......	......	1,780	1,898	2,780	4,167	4,201
Unsatisfactory	......	......	......	......	......	......	......	458	325	241	469	901
Re-examinations	......	......	......	......	......	......	......	100	564	1,047	893	1,338
Virulence tests	......	......	......	......	......	......	......	......	48	77	21	349
Virulence re-tests	......	......	......	......	......	......	......	......	......	......	4	67
Total	......	......	......	......	......	......	......	**3,725**	**3,737**	**4,969**	**6,234**	**8,265**
Tuberculosis:												
Sputum examinations:												
Positive	......	......	......	......	......	......	......	52	46	125	110	100
Negative	......	......	......	......	......	......	......	113	130	311	384	373
Unsatisfactory	......	......	......	......	......	......	......	......	5	6	44	9
Total	......	......	......	......	......	......	......	**165**	**181**	**442**	**538**	**482**
Enteric diseases:												
Blood agglutination tests:												
Typhoid fever:												
Positive	......	......	......	......	......	......	......	18	48	70	29	36
Negative	......	......	......	......	......	......	......	53	387	148	82	113
Unsatisfactory	......	......	......	......	......	......	......	13	8	30	42	65
Total	......	......	......	......	......	......	......	**84**	**443**	**248**	**153**	**214**
Paratyphoid fever:												
Positive	......	......	......	......	......	......	......	......	......	......	......	2–A 2–B 3–A & B
Negative	......	......	......	......	......	......	......	......	......	......	11	90
Unsatisfactory	......	......	......	......	......	......	......	......	......	......	1	66
Total	......	......	......	......	......	......	......	......	......	......	12*	**163**
Total	......	......	......	......	......	......	......	**84**	**443**	**248**	165	**377**
Examination intestinal discharges:												
Typhoid fever:												
Positive	......	......	......	......	......	......	......	1	11	10	6	35
Negative	......	......	......	......	......	......	......	2	532	1,689	79	141
Unsatisfactory	......	......	......	......	......	......	......	......	1	64	23	20
Total	......	......	......	......	......	......	......	**3**	**544**	**1,763**	**108**	**196**
Paratyphoid fever:												
Positive	......	......	......	......	......	......	......	......	......	......	......	......
Negative	......	......	......	......	......	......	......	......	......	......	4	......
Unsatisfactory	......	......	......	......	......	......	......	......	......	......	2	......
Total	......	......	......	......	......	......	......	......	......	......	**6***	......

Dysentery:												
Positive												
Negative											7	
Unsatisfactory												
Total											7*	
5 **Total**								**3**	**544**	**1,763**	**121**	**196**
Syphilis:												
Complement-fixation test:												
Positive								62	224	1,320	747	776
Negative								201	935	2,960	1,186	2,257
Unsatisfactory								44	137	437	344	99
Doubtful												594
Re-examinations									57	356	7,413	11,937
Total								**307**	**1,353**	**5,073**	**9,690**	**15,663**
Gonorrhea												
Complement-fixation test:												
Positive								19	7	23	36	37
Negative								13	96	567	271	310
Unsatisfactory								23	35	61	213	22
Doubtful												273
Re-examinations								52	20	47	582	821
Total								**107**	**158**	**698**	**1,102**	**1,463**
Microscopical examinations:												
Positive								3	5	13	30	34
Negative								2	6	24	76	66
Unsatisfactory								1	3	5	29	14
Total								**6**	**14**	**42**	**135**	**114**
Total								**113**	**172**	**740**	**1,237**	**1,577**
Pneumonia:												
Pneumococcus type differentiation:												
Sputum												
Positive:												
Type I											13	6
Type II											8	4
Type III											4	13
Type IV											21	22
Combined												2
Negative											32	68
Unsatisfactory											9	12
Supplementary reports											80	168
Total									**33**	**123**	**167**	**295**

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* Previous to January, 1918, paratyphoid fever and dysentery examinations were included in the caption "Typhoid Fever".

† Although located in New York City this laboratory does not serve the city but the outlying districts — Long Island, Rockland, Orange and Westchester counties.

DIAGNOSTIC EXAMINATIONS — (*Concluded*)

Branch Laboratory New York City † — (*Concluded*)

	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Influenza:												
Positive											13	
Negative											205	
Unsatisfactory											8	
Total											226	
Other diseases								60	61	77	90	216
Total								4,457	6,524	13,455	18,468	27,071

† Although located in New York City this laboratory does not serve the city but the outlying districts — Long Island, Rockland, Orange and Westchester counties.

TABLE OF DIAGNOSTIC AND SANITARY EXAMINATIONS MADE DURING 1919 BY STATE, MUNICIPAL AND COUNTY LABORATORIES OF NEW YORK STATE WHICH HAVE BEEN APPROVED BY THE STATE COMMISSIONER OF HEALTH — EXCLUSIVE OF NEW YORK CITY LABORATORIES

	DIAGNOSTIC EXAMINATIONS										
			ENTERIC DISEASES				GONORRHEA				
	Diphtheria	Tuberculosis	Blood	Feces	Paratyphoid Fever §	Syphilis	Serum	Smear	Malaria	Pneumonia	Miscellaneous
Division of Laboratory and Research New York State Department of Health											
Central Laboratory in Albany	36,307	7,186	§2,424	§1,341	...	68,359	...	2,113	...	*810	..
Branch Laboratory, New York City	8,265	482	§377	§196	...	15,663	114	1,463	...	295	..
State Institute for Study of Malignant Disease, Buffalo	...	...	...	...	...	...	...	...	...	...	..
MUNICIPAL AND COUNTY LABORATORIES											
Amsterdam	2,013	188	32	...	...	...	...	156	2	...	..
Batavia — Genesee County	807	195	38	4	...	...	...	79	...	...	..
Belmont — Allegany County	141	80	38	5	4	...	...	28	...	...	1
Buffalo	53,360	2,178	629	1	48	11,243	66	1,911	7	114	4
Canandaigua — Ontario County	590	301	16	...	...	21	1	38	...	...	..
Corning — Steuben County	1,801	689	178	...	...	...	...	148	...	...	..
Geneseo — Livingston County	245	17	...	...	...	...	...	3	...	...	..
Glens Falls — Warren County	1,092	207	35	8	...	...	...	102	1	...	..
Gloversville	195	126	...	3	...	...	37	...	...	...	..
Jamestown — (milk only)	...	...	...	...	...	...	...	...	...	...	..
Kingston — Ulster County	875	172	49	...	...	...	...	49	9	...	1
Middletown	178	54	7	...	...	...	...	52	...	...	6
Newburg	326	179	6	...	...	...	...	32	...	...	..
Olean	588	4	6	...	...	...	...	2	1	...	..
Poughkeepsie	3,746	119	23	26	...	...	3	166	4	3	27
Rochester	6,547	1,078	211	...	...	...	...	215	...	109	..
Rome	61	...	2	...	...	...	...	...	...	...	..
Schenectady — City and County	169	76	...	3	...	190	...	61	...	20	..
Syracuse	7,981	1,697	397	53	...	217	...	447	...	55	..
Troy	1,359	325	153	1	28	663	1	143	2	...	6
Tuxedo Park — Tuxedo Laboratory	55	27	19	2	7	...	...	10	4	...	3
Utica	1,506	484	60	...	...	986	4	658	2	3	..
Yonkers	3,045	813	60	...	...	...	...	280	48	...	..
PRIVATE LABORATORIES DOING PUBLIC HEALTH WORK											
Albany — Bender Hygienic	4,886	2,066	309	9	13	3,387	...	553	5	...	..
Binghamton — Nelson & Lauder	1,353	199	44	1	...	...	...	57	2	...	..
Dobbs Ferry — The von Wedel Laboratories	1,024	182	128	9	2	459	20	105	447	16	..
Elmira — City Laboratory	492	57	92	...	3	...	...	23	2	...	..
Mamaroneck — Cappus Laboratories	100	70	21	22	19	32	21	20	93	...	..
INSTITUTIONAL AND PRIVATE LABORATORIES											
Albany — Albany Hospital	20	15	5	35	...	4	...	40	...	...	14
Binghamton — Kilmer Pathological	2	19	17	...	2	101	1	13	3	2	..
Endicott — Endicott-Johnson Co.	786	98	...	...	...	7	...	117	1	...	..
Poughkeepsie — Hudson River State Hospital	149	104	14	10	...	506	...	9	17	1	1
Poughkeepsie — Vassar Brothers Hospital†	...	...	...	...	...	...	...	...	...	...	..
Utica — Laboratory of W. Wilson‡	...	...	...	...	...	...	...	...	...	...	..
Watertown — Calkins & Farmer Laboratory	141	25	3	...	...	110	...	24	...	...	..
Totals	140,205	19,512	5,402	1,729	128	101,948	268	7,117	650	1,428	63

* This includes influenza examinations.

† No reports received since approval in November, 1919.

‡ No public health work done during the year.

§ These figures were not classified into blood and feces.

TABLE OF DIAGNOSTIC AND SANITARY EXAMINATIONS MADE DURING 1919 BY STATE — (*Continued*)

	MISCELLANEOUS EXAMINATIONS												
											WATER ANALYSIS		
	Smears	Blood	Urine analysis	Stomach contents	Body fluids	Feces	Pathological specimens	Post mortem exams.	Milk analysis	Cream analysis	Chemical	Bacterial	Unclassified
Division of Laboratories and Research New York State Department of Health													
Central Laboratory in Albany	...	...	...	...	...	...	...	...	...	...	455	911	1,382
Branch Laboratory, New York City	...	...	...	...	...	...	...	...	...	...	...	...	216
State Institute for Study of Malignant Disease, Buffalo	...	...	...	...	...	...	3,387	...	...	...	...	...	...
MUNICIPAL AND COUNTY LABORATORIES													
Amsterdam	3	72	138	5	8	...	...	...	653	...	...	...	...
Batavia — Genesee County	1	59	1,435	2	...	5	...	...	...	...	...	841	88
Belmont — Allegany County	3	99	201	...	...	2	1	...	1	1	...	1	12
Buffalo	263	16	1,190	3	264	11	5	5	18,177	69	9	590	8,042
Canandaigua — Ontario County	10	194	201	1	...	1	11	1	32	1	...	1	34
Corning — Steuben County	531	523	2,279	49	12	35	1	...	999	...	...	1,550	313
Geneseo — Livingston County	...	4	21	...	...	...	...	...	...	...	...	...	1
Glens Falls — Warren County	7	333	2,261	4	3	4	57	2	165	4	...	17	19
Gloversville	5	13	18	...	2	1	...	...	3	1	...	...	6
Jamestown — (milk only)	...	...	...	...	...	...	...	...	1,499	81	...	...	...
Kingston — Ulster County	11	77	294	2	...	3	...	...	83	...	3	10	7
Middletown	...	6	...	...	...	...	...	...	...	...	...	...	...
Newburgh	...	...	7	...	...	...	...	...	106	23	...	24	...
Olean	4	2	3	...	...	...	...	...	60	5	...	...	1
Poughkeepsie	8	9	57	2	2	...	...	3	1,046	106	75	1,003	10
Rochester	...	...	16	...	2	...	...	...	2,722	108	...	251	37
Rome	...	...	...	...	...	...	...	...	151	1	...	5	...
Schenectady — City and County	49	86	446	2	18	2	107	5	11	7	...	...	9
Syracuse	74	27	41	...	...	9	...	...	2,994	162	...	496	257
Troy	49	117	90	6	55	17	284	17	630	12	...	15	3
Tuxedo Park — Tuxedo Laboratory	11	195	636	25	1	7	14	4	120	6	...	35	9
Utica	85	28	22	1	18	3	...	...	1,585	...	...	114	28
Yonkers	6	976	...	...	...	...	...	...	1,060	113	19	9	174
PRIVATE LABORATORIES DOING PUBLIC HEALTH WORK													
Albany — Bender Hygienic	889	326	422	13	155	52	1,988	15	1,983	115	...	22	196
Binghamton — Nelson & Lauder	29	55	1,130	4	1	4	22	...	907	76	110	865	76
Dobbs Ferry — The von Wedel Laboratories	37	2,119	2,839	41	94	104	116	...	3,143	60	21	71	575
Elmira — City Laboratory	...	79	475	6	4	9	43	...	681	643	...	13	...
Mamaroneck — Cappus Laboratories	43	217	1,407	37	21	40	67	1	75	...	3	76	272
INSTITUTIONAL AND PRIVATE LABORATORIES													
Albany — Albany Hospital	523	52	6,056	27	117	200	1,463	38	9	4	...	...	1,702
Binghamton — Kilmer Pathological	40	219	255	7	3	10	70	...	1	...	...	...	44
Endicott — Endicott-Johnson Co.	9	107	1,044	...	...	5	...	...	...	...	2	...	4
Poughkeepsie — Hudson River State Hospital	58	96	776	1	121	19	29	56	45	...	...	33	20
Poughkeepsie — Vassar Brothers Hospital†	...	...	...	...	...	...	...	...	...	...	...	...	...
Utica — Laboratory of W. Wilson‡	...	...	...	...	...	...	...	...	...	...	...	...	...
Watertown — Calkins & Farmer Laboratory	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	2,748	6,106	23,850	238	901	543	7,665	147	38,941	1,598	697	6,953	13,537

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* This includes influenza examinations.

† No reports received since approval in November, 1919.

‡ No public health work done during the year.

TABLE OF DIAGNOSTIC AND SANITARY EXAMINATIONS MADE DURING 1919 BY STATE — (*Concluded*)

	PREPARATION VACCINES		Total 1919	TOTAL FOR PREVIOUS YEARS	
	Stock	Auto-geaous		1918	1917
Division of Laboratories and Research New York State Department of Health					
Central Laboratory in Albany	....	....	121,288	69,396	82,693
Branch Laboratory, New York City	....	....	27,071	18,468	13,435
State Institute for Study of Malignant Disease, Buffalo	....	....	3,387	2,282	2,330
MUNICIPAL AND COUNTY LABORATORIES					
Amsterdam	....	8	3,278	1,472	1,482
Batavia — Genesee County	....	....	3,554	2,943	2,648
Belmont — Allegany County	....	....	618	643	583
Buffalo	....	17	98,222	49,115	47,923
Canandaigua — Ontario County	....	....	1,544	934	1,408
Corning — Steuben County	....	39	9,147	7,055	7,536
Geneseo — Livingston County	....	....	291	345	441
Glens Falls — Warren County	....	3	4,326	1,875	5,205
Gloversville	....	5	415	1,606	967
Jamestown — (milk only)	....	....	1,580	987	3,204
Kingston — Ulster County	....	6	1,651	....	....
Middletown	....	....	303	36	....
Newburgh	....	....	703	610	548
Olean	....	....	676	....	1,080
Poughkeepsie	....	12	6,450	2,115	1,925
Rochester	....	....	11,296	7,727	7,053
Rome	....	....	220	569	522
Schenectady — City and County	22	23	1,306	8,249	7,124
Syracuse	....	....	14,907	13,215	16,918
Troy — Samaritan Hospital	....	24	4,000	2,487	1,766
Tuxedo Park — Tuxedo Laboratory	....	5	1,195	840	1,535
Utica	....	7	5,594	2,506	....
Yonkers	....	....	6,612	8,392	4,572
PRIVATE LABORATORIES DOING PUBLIC HEALTH WORK					
Albany — Bender Hygienic	....	79	17,483	5,557	14,583
Binghamton — Nelson & Lauder	....	32	4,967	4,653	5,620
Dobbs Ferry — The von Wedel Laboratories	43	62	11,717	7,217	6,766
Elmira — City Laboratory	....	17	2,639	3,658	4,683
Mamaroneck — Cappus Laboratories	....	69	2,726	2,213	....
INSTITUTIONAL AND PRIVATE LABORATORIES					
Albany — Albany Hospital	....	36	10,360	11,462	....
Binghamton — Kilmer Pathological	....	17	826	....	....
Endicott — Endicott-Johnson Co.	....	....	2,180	....	....
Poughkeepsie — Hudson River State Hospital	....	55	2,120	1,806	
Poughkeepsie — Vassar Brothers Hospital†	....	....	....	....	....
Utica — Laboratory of W. Wilson‡	....	....	....	19	54
Watertown — Calkins & Farmer Laboratory	....	....	303	....	....
Totals	65	516	384,955	240,452	244,604

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* This includes influenza examinations.

† No reports received since approval in November, 1919.

‡ No public health work done during the year.

WATER ANALYSES

	1908	1909	1910	1911	1912	1913	*1914	*1915	*1916	*1917	*1918	*1919
Bacterial	1,175	1,056	1,564	2,131	2,800	2,017	1,091	1,447	1,352	1,189	1,140	911
Chemical	626	646	1,037	1,850	2,400	2,507	703	661	626	532	541	455

* The decrease in the number of water analyses is due to the fact that careful field inspections on all samples of water sent to the laboratory for examination were required for the first time in 1914.

ANALYTICAL RESULTS OF SAMPLES OF WATER OBTAINED FROM PUBLIC SUPPLIES OR SUPPLIES USED BY PUBLIC INSTITUTIONS

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c.	1 c.c.	1-10 c.c.	1-100 c.c.
Albion	Raw water at filter plant, public supply	2/ 6/19	25	Trace	....	....	.014	.160	.010	2.00	15.00	400.00	187.00	6.90	700	+	—	—	...
Albion	Treated water at pump discharge, public supplies	2/ 6/19	....	....	....	....	....	....	....	....	....	....	....	....	1,900	+	—	—	...
Albion	Tap at express office, public supply	2/ 6/19	20	....	....	....	.006	.132	.015	2.00	14.00	400.00	186.00	6.50	160	—	—	—	...
Albion (Western House of Refuge)	Well	2/ 6/19	....	....	....	....	....	....	....	....	....	....	....	....	7	—	—	—	...
Alexandria Bay	Tap at Dr. Luken's office, public supply	8/ 6/19	....	....	....	....	.002	.066	Trace	.100	11.00	102.80	92.00	2.30	39,000	+	—	—	...
Alexandria Bay	Tap at Grant & Co.'s store, public supply	8/ 6/19	....	....	....	....	....	....	....	....	....	....	....	....	24,000	+	—	—	...
Altamont	New spring, public supply	5/16/19	....	Trace	....	....	.014	.046	.001	1.00	9.60	136.00	88.00	.70	170	—	—	—	...
Altamont	Overflow at storage reservoir, public supply	5/16/19	....	....	....	....	....	....	....	....	....	....	....	....	1,200	+	+	+	...
Altamont	Edge of distributing reservoir, public supply	5/16/19	....	....	....	....	....	....	....	....	....	....	....	....	410	+	—	—	...
Altamont	Tap, public supply	5/16/19	15	100	....	....	.016	.160	.005	.800	1.60	95.70	83.10	4.40	7,300	+	+	—	...
Auburn (State prison)	Well at men's farm	6/ 2/19	....	Trace	....	....	.008	.040	....	.80	47.00	250.00	....	1.80	1,700	+	—	—	...
Auburn (State prison)	Tap at main farm	6/ 2/19	....	....	....	....	.010	.060	....	.50	.80	105.80	103.00	1.60	210	+	—	—	...
Auburn (State prison)	Tap in kitchen	....	....	....	....	....	....	....	....	....	....	....	....	....	70	+	—	—	...
Auburn (State prison)	Well at keeper's cottage	7/10/19	....	....	....	....	.006	.046	.005	3.00	14.00	393.00	372.00	1.70	240	+	—	—	...
Ausable Forks	Tap at D. & H. R. R. station, public supply	6/ 5/19	50	....	....	....	.014	.100	.005	Trace	.40	22.10	20.00	10.80	950	+	—	—	...
Ausable Forks	Tap at residence, public supply	6/ 5/19	....	....	....	....	....	....	....	....	....	....	....	....	7,700	+	—	—	...
Ausable Forks	Intake dam, public supply	9/12/19	....	....	....	....	....	....	....	....	....	....	....	....	....	+	+	—	...
Ausable Forks	Tap, public supply	9/12/19	60	Trace	....	....	.008	.136	.002	.80	.40	48.60	29.00	10.70	13,000	+	+	—	...
Baldwinsville	Tap at pumping station, public supply	8/ 9/19	....	....	....	....	.002	.008	....	1.40	3.20	171.40	166.00	.70	1,900	—	—	—	...
Baldwinsville	Tap at Tappen's coal office, public supply	8/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	35,000	+	—	—	...
Barker	Raw water, public supply	7/18/19	....	4	....	....	.032	.136	.003	.100	10.00	102.80	102.00	2.30	3,100	+	—	—	...
Barker	Tap, public supply	7/18/19	....	Trace	....	....	.006	.024	.001	.200	10.00	102.80	102.00	1.30	10	—	—	—	...
Bath (Soldiers' and Sailors' Home)	Water at spring house	4/18/19	....	....	....	....	.010	.038	.002	3.00	3.60	188.50	143.00	.70	475	—	—	—	...

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS — Free ammonia	Albuminoid ammonia	Nitrites	Nitrates	Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent) 10 c.c.	1 c.c.	1-10 c.c.	1-100 c.c.
Bath (Soldiers' and Sailors' Home)	Reservoir	4/18/19													120	—	—	—	
Bath (Soldiers' and Sailors' Home)	Tap at hospital	4/18/19													5	—	—	—	
Bath (Soldiers' and Sailors' Home)	Wells	4/18/19					.056	.022	.002	Trace	4.20	154.60	92.00	.60	5	—	—	—	
Beacon	Fishkill creek at emergency intake, public supply	10/29/19	20	Trace			.008	.082	.001	.040	2.80	100.00	99.00	3.90	950	+	+	+	
Beacon	Tap, public supply	10/29/19	Trace	Trace			.006	.016	.001	.020	2.40	23.40	16.00	1.60	10	—	—	—	
Bedford Hills (New York State Reformatory for Women)	Well 60 feet from stream	4/10/19													1	—	—	—	
Bedford Hills (New York State Reformatory for Women)	Tap at pumping station	4/10/19													1	—	—	—	
Bedford Hills (New York State Reformatory for Women)	Tap at engineer's residence, 0.4–0.5 parts chlorine added	4/10/19													1	—	—	—	
Bedford Hills (New York State Reformatory for Women)	Tap at engineer's residence, 0.35 parts chlorine added	4/10/19													1	—	—	—	
Bedford Hills (New York State Reformatory for Women)	Raw water from old well	7/18/19					.002	.006	.001	.400	5.00	71.40	66.00	1.30	26,000	+	+	+	
Bedford Hills (New York State Reformatory for Women)	Raw water from new well	7/18/19		3			.004	.002	.001	.240	6.00	80.00	79.00	.50	1,800	+	—	—	
Bedford Hills (New York State Reformatory for Women)	Chlorinated water	7/18/19													5,000	—	—	—	
Bedford Hills (New York State Reformatory for Women)	Test well	9/12/19														—	—	—	
Bedford Hills (New York State Reformatory for Women)	New dug well	9/12/19		Trace			.002	.012	.001	.300	6.00	74.30	71.00	1.30		+	—	—	
Bedford Hills (New York State Reformatory for Women)	Driven well	9/12/19	Trace	Trace			.018	.002	.001	.200	3.20	54.30	49.00	.70					

Binghamton	Raw water at filter plant, public supply	7/14/19	...	60	...	...	.010	.042	.001	2.00	14.00	122.80	102.00	5.00	1,300	+	+	−	
Binghamton	Filtered and chlorinated water at filter plant, public supply	7/14/19	...	...	...	...	.002	.028	...	1.00	9.00	91.40	74.00	1.10	2,000	−	−	−	..
Bloomingdale	Well, public supply	9/ 9/19	...	...	...	...	...	...	...	...	8.00	...	...	...	160	−	−	−	..
Bloomingdale	Reservoir, public supply	9/ 9/19	...	...	...	...	...	...	...	...	...	...	...	...	29,000	−	−	−	..
Bloomingdale	Tap, public supply	9/ 9/19	Trace	Trace	...	...	.020	.028	.002	2.80	6.00	100.00	100.00	.70	4,300	−	−	−	..
Brocton	Tap, public supply	10/23/19	25	10	...	...	.002	.048	.003	.200	4.20	134.20	134.00	2.10	33,000	+	+	−	..
Brooklyn (State hospital)	Tap in kitchen at Creedmoor	8/18/19	5	Trace	...	...	.084	.016	.005	7.00	11.00	57.10	20.00	.40	120	−	−	−	..
Brooklyn (State hospital)	Tap in main kitchen	8/18/19	...	...	...	...	.004	.002	.001	5.00	47.00	174.20	105.00	.20	300,000	−	−	−	..
Buffalo (State hospital)	Tap on softened water	10/ 3/19	...	50	...	...	.010	.048	.005	.060	11.00	72.90	72.00	1.20	1	−	−	−	..
Buffalo (State hospital)	Tap in scullery of women's kitchen, untreated water	10/ 3/19	...	Trace	...	...	.010	.062	.001	.040	10.40	105.80	92.00	1.50	350	−	−	−	..
Buffalo (State hospital)	Tap, filtered water	10/ 3/19	...	...	...	...	...	...	...	...	...	...	...	...	...	−	−	−	..
Burden's Lake (proposed Boy Scout camp)	Well	6/20/19	15	Trace	...	...	.010	.192	Trace	.060	1.60	18.20	13.00	1.60	650	+	+	−	..
Burden's Lake (proposed Boy Scout camp)	Well	7/25/19	15	20	...	...	.004	.038	.005	.600	4.60	23.40	18.00	2.50	8,700	+	+	+	..
Canastota	Canastota creek, auxiliary supply, public supply	6/ 3/19	...	...	...	...	...	...	...	...	...	...	...	...	17,000	+	+	+	..
Canastota	Water from impounding reservoir at spillway, public supply	6/ 3/19	Trace	5	...	...	.028	.082	Trace	.60	3.20	435.50	179.00	1.10	230	+	+	−	..
Canastota	Tap, public supply	6/ 3/19	5	8	...	...	.010	.068	Trace	.50	3.00	435.50	205.00	1.90	240	+	−	−	..
Canton	Tap, public supply	1/15/19	30	15	...	...	.016	.050	.010	1.00	1.40	101.50	81.00	1.10	230	−	−	−	..
Canton	O'Brien spring, near intake, public supply	1/31/19	...	...	...	...	...	...	...	...	...	...	...	...	280	−	−	−	..
Canton	Allen spring, at intake to pipe line, public supply	1/31/19	...	...	...	...	...	...	...	...	...	...	...	...	190	+	−	−	..
Canton	Barrett spring, near intake, public supply	1/31/19	...	...	...	...	...	...	...	...	...	...	...	...	330	−	−	−	..
Canton	Matthews spring, at intake, public supply	1/31/19	20	2	...	...	.006	.026	.005	1.00	.80	84.30	78.00	1.10	425	+	−	−	..
Canton	Dinsdale spring, at intake, public supply	1/31/19	...	...	...	...	...	...	...	...	...	...	...	...	190	+	−	−	..
Canton	Barrigan spring, near intake, public supply	1/31/19	...	...	...	...	...	...	...	...	...	...	...	...	50	−	−	−	..
Canton	Collar spring, near intake, public supply	1/31/19	...	...	...	...	...	...	...	...	...	...	...	...	60	−	−	−	..
Canton	Little river, near tee in pipe crossing, public supply	1/31/19	40	Trace	...	...	.010	.092	.005	.300	.80	37.70	37.00	6.30	200	+	−	−	..
Canton	Reservoir, near overflow, public supply	1/31/19	...	...	...	...	...	...	...	...	...	...	...	...	500	−	−	−	..
Canton	Tap at Goodnough's drug store, mixed springs, public supply	1/31/19	20	2	...	...	.006	.026	.005	1.00	.80	84.30	78.00	1.10	425	+	−	−	..
Castile	Tap, public supply	1/22/19	...	...	...	...	.006	.026	.003	.120	2.40	134.20	121.00	.40	200	+	−	−	..
Castile	Fountain, public supply	1/22/19	...	...	...	...	...	...	...	...	2.00	...	...	...	210	+	+	−	..
Chatham	Tap at Railroad avenue, public supply	5/29/19	...	...	...	...	...	...	...	...	...	...	...	...	5	+	−	−	..
Chatham	Tap at Kinderhook street, public supply	5/29/19	...	...	...	...	...	...	...	...	...	...	...	...	20	−	−	−	..
Chatham	Tap at village hall, public supply	5/29/19	...	Trace	...	...	.002	.060	.002	1.20	3.60	62.90	28.00	1.10	...	...	...	...	..
Cherry Valley	Tap, public supply	3/21/19	8	12	...	...	.026	.078	Trace	.20	1.40	55.70	45.00	3.00	400	+	−	−	..
Chester	Lake at intake, near gate house, public supply	9/ 1/19	...	...	...	...	...	...	...	...	...	...	...	...	4,700	+	+	−	..
Chester	Lake outlet, public supply	9/ 1/19	10	Trace	...	...	.002	.120	.001	.020	1.40	18.20	13.00	2.70	...	...	...	...	..
Chester	Tap, public supply	9/ 1/19	...	...	...	...	...	...	...	...	...	...	...	...	9,000	−	−	−	..

ANALYTICAL RESULTS OF SAMPLES OF WATER — (Continued)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c.	1 c.c.	1-10 c.c.	1-100 c.c
Clinton	Tap at Hogan's store	4/19/19													100	—	—	—	
Clinton	Tap at Allen's	4/19/19	5	3			.014	.026	.001	.80	2.80	364.50	156.00	1.30	250	+	—	—	
Clinton (Hamilton College)	Catch basin on Miller street tributary to reservoir	10/ 6/19													1,600	+	+	+	
Clinton (Hamilton College)	Reservoir	10/ 6/19													30	+	—	—	
Clinton (Hamilton College)	Tap at college	10/ 6/19													75	—	—	—	
Clinton	Tap, public supply	10/ 6/19													2,100	+	+	—	
Cobleskill	Raw water, public supply	12/15/19	10	10			.018	.124	Trace	.500	1.40	55.70	55.00	3.70	5,100	+	+	—	
Cobleskill	Tap, filter effluent, public supply	12/15/19					.144	.116	Trace	.600	1.60	57.10	57.00	2.80	200	+	—	—	
Town of Collins (Gowanda State Hospital)	Brook east of railroad culvert, Dodman farm, proposed supply	2/21/19													220	+	—	—	
Town of Collins (Gowanda State Hospital)	Brook east of railroad after passing through pasture land, proposed supply	2/21/19													390	+	—	—	
Town of Collins (Gowanda State Hospital)	North brook, Dodman farm, near Buffalo street, Collins proposed supply	2/21/19	5	3			.024	.040	.003	1.00	2.60	140.00	126.00	1.10	70	+	—	—	
Town of Collins (Gowanda State Hospital)	Cattaraugus Reservation springs, at water supply to reservoir	2/21/19													15	—	—	—	
Town of Collins (Gowanda State Hospital)	Tap at laboratory of hospital, regular supply	2/21/19	Trace	Trace			.034	.034	.005	1.40	3.20	162.80	157.00	1.40	25	—	—	—	
Conifer	Reservoir, public supply	10/ 9/19	70	Trace			.006	.114	Trace	.060	.80	16.90	14.00	14.10	9,900	+	—	—	
Conifer	Reservoir, public supply	11/20/19													70	—	—	—	
Conifer	Tap, public supply	11/20/19	60				.004	.086	.005	.100	1.60	22.10	22.00	9.20		—	—	—	
Corinth	Sturdevant creek, public supply	6/28/19	5	Trace			.004	.042	.002	.100	.40	50.00	50.00	1.50	30,500	+	+	+	
Corinth	Lower reservoir, public supply	6/28/19													325	+	—	—	
Corinth	Tap, public supply	6/28/19	10	Trace			.002	.062	.001	.020	.40	20.80	9.00		180	+	+	—	
Cornwall	Reservoir, public supply	6/20/19													190	—	—	—	
Cornwall	Tap, public supply	6/20/19	5	Trace			.020	.068	.000	.020	2.20	22.10	21.00	1.50	46,000	+	+	—	

Coxsackie	Reservoir, Diepkill intake, public supply	11/ 8/19	15	15	....	....	.002	.108	Trace	.200	3.00	71.40	66.00	2.50	1,500	+	+	+	..
Coxsackie	Climax reservoir, public supply	11/ 8/19	30	3	....	....	.001	.152	.012	.060	3.20	42.90	34.00	4.80	1,200	+	+	+	..
Coxsackie	Tap, public supply	11/ 8/19	....	....	....	....	....	....	....	....	....	....	....	....	1,500	+	+	+	..
Dannemora	Tap, public supply	4/24/19	35	Trace	....	....	.012	.078	.007	.020	.60	20.80	15.00	6.90	45	−	−	−	..
Dannemora	Brook reservoir	9/12/19	....	....	....	....	....	....	....	....	....	....	....	....	500	+	+	−	..
Dannemora	Spring	9/12/19	....	....	....	....	....	....	....	....	....	....	....	....	10	−	−	−	..
Dannemora	Tap, public supply	9/12/19	25	Trace	....	....	.010	.098	.002	.060	1.00	50.00	36.00	6.40	2,900	+	+	−	..
Dansville U. S. Government Hospital No. 13	All healing spring	2/10/19	....	5	....	....	.014	.018	.010	.600	4.60	82.90	62.00	.10	8	−	−	−	..
Dansville U. S. Government Hospital No. 13	Escott spring	2/10/19	2	3	....	....	.020	.018	.005	.500	4.20	70.00	59.00	.10	180	−	−	−	..
Dansville U. S. Government Hospital No. 13	Tap in hospital, village water	2/10/19	3	....	....	....	.018	.020	.001	.700	2.20	131.40	109.00	.10	30	−	−	−	..
Dansville, U. S. Government Hospital No. 13	Receiving basin, spring supply	10/11/19	....	Trace	....	....	.002	.016	Trace	.200	4.80	157.20	154.00	2.00	....	+	+	+	..
Dansville, U. S. Government Hospital No. 13	Little mill creek at intake, public supply	10/11/19	Trace	Trace	....	....	.002	.026	Trace	.400	2.20	175.20	132.00	1.30	8,900	+	+	−	..
Dansville, U. S. Government Hospital No. 13	Tap, public supply	10/11/19	....	Trace	....	....	.002	.008	Trace	.500	2.40	175.20	136.00	1.30	....	+	+	−	..
Delmar	Tap, public supply	10/29/19	....	....	....	....	....	....	....	....	....	....	....	....	25	−	−	−	..
Dryden	Tap A, public supply	10/24/19	....	....	....	....	.002	.028	.002	1.00	1.20	154.20	154.00	1.80	90	−	−	−	..
Dryden	Tap B, public supply	10/24/19	....	....	....	....	....	....	....	....	....	....	....	....	850	−	−	−	..
Dunkirk	Raw water, suction well, public supply	6/14/19	....	....	....	....	....	....	....	....	....	....	....	....	800	+	−	−	..
Dunkirk	Tap at pumping station, chlorinated water, public supply	6/14/19	....	....	....	....	....	....	....	....	....	....	....	....	200	−	−	−	..
Dunkirk	Tap at police patrol barn, public supply	6/14/19	5	5	....	....	.014	.062	.001	.060	9.20	88.60	....	1.40	6	+	−	−	..
Dunkirk	Tap at Erie hotel, chlorinated water, public supply	6/14/19	....	....	....	....	....	....	....	....	....	....	....	....	41	+	−	−	..
East Syracuse	Spring, proposed additional supply	7/28/19	....	....	....	....	....	....	....	....	....	....	....	....	....	+	−	−	..
East Syracuse	Spring brook, additional supply	7/28/19	....	....	....	....	....	....	....	....	....	....	....	....	....	+	+	−	..
East Syracuse	Water from west loop of system, present public supply	7/28/19	....	....	....	....	....	....	....	....	....	....	....	....	....	+	−	−	..
East Syracuse	Water from east loop, public supply	7/28/19	....	....	....	....	....	....	....	....	....	....	....	....	....	−	−	−	..
Elizabethtown	Reservoir, public supply	9/ 8/19	....	....	....	....	....	....	....	....	....	....	....	....	140,000	+	−	−	..
Elizabethtown	Tap, public supply	9/ 8/19	Trace	Trace	....	....	.008	.008	.001	.100	0.40	57.10	57.00	1.10	31,000	+	−	−	..
Elmira	Raw water, public supply	6/23/19	20	5	....	....	.024	.104	.005	.600	4.80	84.30	78.00	2.90	600	+	+	+	..
Elmira	Filtered water, public supply	6/23/19	5	....	....	....	.014	.072	Trace	.600	4.80	82.90	76.00	1.60	250	−	−	−	..
Elmira (New York State Reformatory for Women)	Tap in laundry, untreated Heller creek water	11/ 8/19	15	5	....	....	.012	.128	.007	.200	2.20	52.90	39.00	1.50	300	+	+	+	..
Elmira (New York State Reformatory for Women)	Tap in main kitchen, city supply	11/ 8/19	....	....	....	....	.008	.064	....	.200	4.00	45.70	36.00	1.20	5	−	−	−	..
Ellicottville	Wells, public supply	11/21/19	....	....	....	....	....	....	....	....	....	....	....	....	....	−	−	−	..
Ellicottville	Reservoir, public supply	11/21/19	....	....	....	....	....	....	....	....	....	....	....	....	....	−	−	−	..
Ellicottville	Tap, public supply	11/21/19	....	....	....	....	....	....	....	....	....	....	....	....	....	−	−	−	..
Fairport	Hydrant near pumping station	2/24/19	....	....	....	....	....	....	....	....	....	....	....	....	35	−	−	−	..
Fairport	Tap, public supply	2/24/19	....	....	....	....	.012	.048	....	20	23.00	814.00	206.00	1.00	5	−	−	−	..

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	Nitrogen as —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. Coli Type (+ = Present) (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c.	1 c.c.	1-10 c.c.	1-100 c.c.
Florida	Reservoir, public supply	8/21/19	15	Trace	.....	.....	.020	.212	.001	.060	2.80	22.10	18.00	5.70	....	+	+	—	...
Fort Edward	Overflow from new reservoir, public supply	6/11/19	40	.....	.....	.....	.012	.116	.010	.20	1.20	26.00	15.00	5.80	300	+	+	+	...
Fort Edward	Tap in village, water from old reservoir, public supply	6/11/19	20	3	.....	.....	.012	.080	.005	.20	1.40	19.50	17.00	4.10	800	+	—	—	...
Fort Edward	Tap at railroad station, public supply	10/13/19	Trace	.....	.....	.....	.002	.012	.002	2.00	7.00	40.30	26.00	.40	57,500	+	+	—	...
Frankfort	Tap at post office, public supply	7/14/19	5	2	.....	.....	.008	.038	.001	.020	1.40	162.80	143.00	1.60	85,000	+	+	—	...
Frankfort	Tap at Thurston hotel, public supply	7/14/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46,000	+	+	—	...
Freeport	Hydrant at Broadway and Main street, public supply	4/24/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	+	—	—	...
Freeport	Tap at Merrick road near Main street, public supply	4/24/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	—	—	—	...
Freeport	Hydrant at Long Beach avenue, public supply	4/24/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	+	—	—	...
Freeport	Water direct from ground	4/24/19	Trace	.....	.....	.....	.004	.156	.005	3.60	15.00	51.40	17.00	.40	....	...	...	...	...
Geneva	Raw water, public supply	10/13/19	.....	5	.....	.....	.022	.084	.003	.200	69.00	128.60	110.00	2.30	500	+	—	—	...
Geneva	Filtered water, public supply	10/13/19	.....	.....	.....	.....	.002	.030	.001	.200	69.00	128.60	110.00	1.40	13,000	—	—	—	...
Geneva	Tap at city hall, public supply	10/13/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15,500	—	—	—	...
Gloversville	Tap, public supply	11/28/19	20	.....	.....	.....	.014	.060	.003	.060	1.00	29.90	28.00	3.60	1	—	—	—	...
Gouverneur	Tap at Sylvia lake house, public supply	8/ 2/19	5	.....	.....	.....	.018	.114	.005	.020	.80	65.70	61.00	3.50	375	—	—	—	...
Gouverneur	Overflow of Trout lake, public supply	8/ 2/19	20	.....	.....	.....	.006	.182	Trace	.060	.60	27.30	24.00	7.60	1,200	+	+	—	...
Gouverneur	Tap at Whitney garage, public supply	8/ 2/19	110	Trace	.....	.....	.008	.264	.007	.100	1.00	29.90	19.00	24.60	4,200	+	+	—	...
Town of Greece	Tap at Lake View hotel, public supply	8/ 7/19	.....	.....	.....	.....	.....	.....	.....	.100	12.00	.....	.....	.....	600	+	—	—	...
Town of Greece	Tap on force main, Lake View hotel, public supply	8/ 7/19	.....	.....	.....	.....	.....	.....	.....	.100	12.00	.....	.....	.....	4,300	+	+	+	...
Town of Greece	Tap at side of Island cottage, public supply	8/ 7/19	.....	.....	.....	.....	.....	.....	.....	.100	12.00	.....	.....	.....	21,000	+	+	+	...
Town of Greece	Tap at Elmhurst hotel, public supply	8/ 7/19	.....	.....	.....	.....	.....	.....	.....	.100	40.00	.....	.....	.....	2,200	+	—	—	...
Town of Greece	Pump at Island cottage hotel, public supply	8/ 7/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,000	+	+	—	...
Town of Greece	Well at Grove hotel, public supply	8/ 7/19	.....	.....	.....	.....	.....	.....	.....	.800	12.00	.....	.....	.....	27,000	+	+	+	...
Greenport	Tap, public supply	11/24/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,200	—	—	—	...

Greenport	Faucet water, public supply	11/24/19													30	—	—	—	
Greenport	Old well, public supply	11/24/19	5				.030	.028	.005	1.40	130.00	55.70	27.00	1.30	5	—	—	—	
Greenport	New well, public supply	11/24/19					.070	.018	Trace	.200	75.00	45.70	21.00	1.60	14,000	+	+	+	
Town of Greenwich	Fly Brook reservoir, public supply	12/13/19	10				.012	.068	Trace	.500	1.60	68.60	47.00	3.70	1,700	+	+	—	
Town of Greenwich	Tap, public supply	12/13/19													1,200	+	+	+	
Hamburg	Raw water, public supply	2/22/19													5	—	—	—	
Hamburg	Well No. 1 at pump discharge, public supply	2/22/19					.006	.006		4.00	23.00	278.00	203.00	.60	20	—	—	—	
Hamburg	First filtrate station, public supply	2/22/19													25	—	—	—	
Hamburg	Tap at Main st., public supply	2/22/19													5	—	—	—	
Hamburg	Tap on pump discharge, unfiltered water, public supply	3/22/19	5	5			.434	.040	.018	.100	220.00	493.00	268.00	2.70	375	—	—	—	
Hamburg	Spray in aerator, public supply	3/22/19													700	—	—	—	
Hamburg	Tap in pipe line leading to clear water basin, filtered water, public supply	3/22/19	5	5			.414	.034	.018	.100	220.00	507.20	272.00	3.20	450	—	—	—	
Hamburg	Tap at Dr. Hill's office, public supply	3/22/19													325	—	—	—	
Hamden	Intake overflow, public supply	9/26/19	5	Trace			.002	.098	.003	.020	1.40	24.70	24.00	3.00	67,500	+	+	+	
Hamden	Tap, public supply	9/26/19													88,000	+	+	—	
Haverstraw	Proposed spring for fountain	6/19/19		Trace			.006	.002	.001	1.40	4.40	88.60	76.00	.50	22,000	—	—	—	
Herkimer	Raw creek water, public supply	1/ 1/19													200	+	+	+	
Herkimer	Chlorinated creek water, public supply	1/ 1/19													1	—	—	—	
Herkimer	Chlorinated well water, public supply	1/ 1/19													2	—	—	—	
Herkimer	Tap at municipal building, chlorinated mixed supply, public supply	1/ 1/19													2	—	—	—	
Herkimer	Tap at Bradley & Zeitler's store, mixed chlorinated supply	1/ 1/19													2	—	—	—	
Herkimer	Raw creek water, public supply	1/ 9/19													220	+	+	+	
Herkimer	Chlorinated creek water, 10.40 A. M., public supply	1/ 9/19													38	—	—	—	
Herkimer	Chlorinated creek water, 10.45 A. M., public supply	1/ 9/19													5	—	—	—	
Herkimer	Chlorinated well water, public supply	1/ 9/19													1	—	—	—	
Herkimer	Tap at Green st., chlorinated mixed supply	1/ 9/19													4	—	—	—	
Herkimer	Tap at Bradley & Zeitler's drug store, public supply	1/ 9/19													2	—	—	—	
Herkimer	Water from water bottle at Palmer House, public supply	1/ 9/19													4	—	—	—	
Herkimer	Raw well water, pump No. 4, public supply	1/15/19													45	—	—	—	
Herkimer	New wells, pump No. 4 at Harter st., chlorinated water, public supply	1/15/19													1	—	—	—	
Herkimer	Chlorinated well water	1/15/19													4	—	—	—	
Herkimer	Tap at Bradley & Zeitler's drug store	1/15/19													1	—	—	—	
Herkimer	Raw well water, old supply, public supply	1/22/19													325	—	—	—	
Herkimer	Chlorinated well water, old supply, public supply	1/22/19													1	—	—	—	

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS — Free ammonia	NITROGEN AS — Albuminoid ammonia	NITROGEN AS — Nitrites	NITROGEN AS — Nitrates	Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent) 10 c.c.	B. COLI TYPE 1 c.c.	B. COLI TYPE 1-10 c.c.	B. COLI TYPE 1-100 c.c.
Herkimer	Raw well water, new supply, public supply	1/22/19	....				.008	.026	.001	3.20	7.00	321.50	282.00	.20	300	—	—	—	..
Herkimer	Chlorinated well water, new supply, public supply	1/22/19	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	—	..
Herkimer	Tap, chlorinated mixed public supply	1/22/19	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	—	..
Herkimer	Chlorinated water, lower pit, new supply, public supply	2/ 7/19	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	—	..
Herkimer	Chlorinated water, upper pit, public supply	2/ 7/19	....	....	....	....	....	....	....	....	....	....	....	....	2	—	—	—	..
Herkimer	Chlorinated water, old well supply, public supply	2/ 7/19	....	....	....	....	....	....	....	....	....	....	....	....	2	—	—	—	..
Herkimer	Chlorinated water, mixed supply, public supply	2/ 7/19	....	....	....	....	....	....	....	....	....	....	....	....	1	—	—	—	..
Herkimer	Chlorinated water, mixed supply, public supply	2/10/19	....	....	....	....	....	....	....	....	....	....	....	....	5	—	—	—	..
Herkimer	Chlorinated water, new well supply, public supply	2/13/19	....	....	....	....	....	....	....	....	....	....	....	....	1	—	—	—	..
Herkimer	Filtered creek water, old supply, public supply	2/13/19	....	....	....	....	....	....	....	....	....	....	....	....	110	+	+	+	..
Herkimer	Chlorinated and filtered creek water, public supply	2/13/19	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	—	..
Herkimer	Tap, chlorinated water, mixed supply, public supply	2/13/19	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	—	—
Herkimer	Raw creek water, public supply	2/14/19	....	....	....	....	....	....	....	....	....	....	....	....	250	+	+	+	..
Herkimer	Raw canal water, effluent from filters, public supply	2/14/19	....	....	....	....	....	....	....	....	....	....	....	....	60	+	+	—	..
Herkimer	Chlorinated well water, public supply	2/14/19	....	....	....	....	.012	.004	.002	8.00	8.00	443.00	262.00	.10	2	—	—	—	..
Herkimer	Chlorinated well and filtered creek water, public supply	2/14/19	5	....	....	....	.018	.044	.001	.300	2.40	128.60	95.00	7.50	4	—	—	—	..
Herkimer	Chlorinated well water at old pumping station, public supply	2/14/19	....	....	....	....	....	....	....	....	....	....	....	....	1	—	—	—	..

Herkimer	Chlorinated well water at Harter Street station, public supply	2/14/19													2	—	—	—	...
Herkimer	Tap at Main street, chlorinated mixed supply, public supply	2/14/19													2	—	—	—	...
Herkimer	Tap, public supply	2/14/19													1	—	—	—	...
Herkimer	Chlorinated well water at old pumping station	2/20/19													1	—	—	—	...
Herkimer	Chlorinated well water at Harter Street station, public supply	2/20/19													2	—	—	—	...
Herkimer	Tap, public supply	2/20/19													1	—	—	—	...
Herkimer	Raw West Canada creek water, public supply	3/20/19	20	15			.016	.116	.008	.20	1.40	54.30	13.00	10.00	6,700	+	+	+	...
Herkimer	Chlorinated well water at old pumping station, public supply	3/20/19	10				.012	.076	.003	.10	2.40	111.40	83.00	4.80	1	—	—	—	...
Herkimer	Raw well water at Harter Street station, public supply	3/20/19		Trace			.014	.014	Trace	3.00	6.20	285.50	220.00	.40	10	—	—	—	...
Herkimer	Chlorinated well water at Harter Street station, public supply	3/20/19					.014	.014		3.00	7.00	278.50	221.00	.20	1	—	—	—	...
Herkimer	Tap, public supply	3/20/19					.008	.014		3.00	6.20	278.50	233.00	.90	1	—	—	—	...
Herkimer	Chlorinated water from dug well, pump No. 1, public supply	4/ 9/19													1	—	—	—	...
Herkimer	Chlorinated water from dug well, pump No. 2, public supply	4/ 9/19													1	—	—	—	...
Herkimer	Chlorinated water from pump No. 5, at Harter street, public supply	4/ 9/19														—	—	—	...
Herkimer	Tap at City Hall, public supply	4/ 9/19														—	—	—	...
Herkimer	Raw creek water, public supply	5/ 3/19													1,200	+	+	+	...
Herkimer	Filtered creek water, public supply	5/ 3/19													850	+	+	+	...
Herkimer	Chlorinated well water at old pumping station, public supply	5/ 3/19	10				.008	.018		.060	2.20	97.10	97.00	3.60	1	—	—	—	...
Herkimer	Raw well water at Harter street, public supply	5/ 3/19													10	—	—	—	...
Herkimer	Chlorinated well water at Harter street, public supply	5/ 3/19					.008	.014		4.00	10.00	321.50	246.00	.60	1	—	—	—	...
Herkimer	Chlorinated water at pump	6/16/19													1	—	—	—	...
Herkimer	Chlorinated water at pump No. 5, public supply	6/16/19														—	—	—	...
Herkimer	Tap at City Hall, public supply	6/16/19	10				.004	.030	Trace	2.00	5.80	328.50	195.00	2.50	1	—	—	—	...
Herkimer	Chlorinated water at old pumping station, public supply	7/ 8/19	10	Trace			.006	.044	Trace	.060	2.40	393.00	121.00	6.30		—	—	—	...
Herkimer	Chlorinated well water at Harter street, public supply	7/ 8/19					.002	.002	Trace	3.00	5.60	385.50	234.00	1.10		—	—	—	...
Herkimer	Tap at City Hall, public supply	7/ 8/19														—	—	—	...
Herkimer	Bellinger spring	7/14/19													22,000	+	+	+	...
Herkimer	Tap at corner Caroline and Park streets, public supply	7/14/19													5	—	—	—	...
Herkimer	Tap at Dr. Fagan's residence, public supply	7/14/19													1	—	—	—	...

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c.	1 c.c.	1-10 c.c.	1-100 c.c.
Herkimer	Chlorinated well water at old pumping station, public supply	7/29/19	...	...	...	...	...	...	...	...	...	...	...	...	1	—	—	—	...
Herkimer	Well at Harter Street station, public supply	7/29/19	...	...	...	...	...	...	...	...	...	...	...	...	1	—	—	—	...
Herkimer	Tap at Dr. Fagan's office, public supply	7/29/19	...	...	...	...	...	...	...	...	...	...	...	...	1	—	—	—	...
Herkimer	Bellinger spring	7/29/19	...	...	...	...	...	...	...	...	...	...	...	...	230	+	+	—	...
Herkimer	Tap at Caroline st. and Bellinger ave., public supply	7/29/19	...	...	...	...	...	...	...	...	...	...	...	...	20	—	—	—	...
Town of Highland	Reservoir No. 3, public supply	4/12/19	5	Trace	...	...	.020	.070	Trace	Trace	1.60	31.20	31.00	1.00	35	—	—	—	...
Town of Highland	Tap, public supply	4/12/19	5	Trace	...	...	.020	.064	Trace	Trace	1.40	31.20	30.00	1.10	50	—	—	—	...
Town of Highland	Intake reservoir, public supply	11/21/19	...	...	...	...	...	...	...	...	...	...	...	...	...	+	—	—	...
Town of Highland	First tap below chlorination plant, 1 lb. chlorine applied per day, public supply	11/21/19	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...
Town of Highland	First tap below chlorination plant, 1½ lbs. chlorine applied per day, public supply	11/21/19	...	...	...	...	...	...	...	...	...	...	...	...	...	+	—	—	...
Town of Highland	First tap below chlorination plant, 2 lbs. chlorine applied per day, public supply	11/21/19	...	...	...	...	...	...	...	...	...	...	...	...	...	—	—	—	...
Town of Highland	Tap, public supply	11/21/19	15	...	...	...	.008	.044	...	.140	2.80	20.80	15.00	3.30	...	—	—	—	...
Hobart	Raw water from township brook at intake, public supply	11/13/19	...	...	...	...	...	...	...	...	...	...	...	...	7,400	+	+	+	...
Hobart	Raw water from receiving reservoir, public supply	11/13/19	10	3	...	...	.024	.108	...	.500	1.40	20.80	16.00	2.70	7,200	+	+	+	...
Hobart	Tap, public supply	11/13/19	Trace	...	...	...	.002	.044	...	.500	1.40	20.80	15.00	2.10	1,700	+	+	—	...
Homer	Water direct from pump, public supply	2/13/19	...	...	...	...	...	...	...	...	...	...	...	...	10	—	—	—	...
Homer	Tap at cor. Cayuga and Cortland sts., public supply	2/13/19	...	...	...	...	...	...	...	...	...	...	...	...	20	—	—	—	...
Homer	Tap at 41 Cayuga st., public supply	2/13/19	...	...	...	...	...	...	...	...	...	...	...	...	10	—	—	—	...
Homer	Tap at D. L. & W. R. R. station, public supply	2/13/19	...	...	...	...	...	...	...	...	...	...	...	...	2,400	—	—	—	...
Hornell	Raw water, public supply	3/26/19	...	...	...	...	...	...	...	...	...	...	...	...	100	+	—	—	...

Hornell	Filtered water not chlorinated, public supply	3/26/19	...	...	...	...	...	...	...	...	...	...	...	...	35	+	—	—	...
Hornell	Tap at No. 5 Helen ave., filtered and chlorinated water, public supply	3/26/19	15	2	...	...	.014	.070	.003	1.00	2.20	42.90	42.00	2.00	5	—	—	—	...
Hornell	Tap at No. 99 Genesee st., public supply	3/26/19	...	...	...	...	...	...	...	...	...	...	...	...	5	—	—	—	...
Hornell	Tap at City Hall, public supply	7/ 1/19	5	5	...	...	.018	.052	.005	.600	1.80	64.30	39.00	1.10	30	—	—	—	...
Hornell	Tap at Dr. Wakeman's office, public supply	7/ 1/19	...	...	...	...	...	...	...	...	...	...	...	...	5	—	—	—	...
Hornell	Tap at Mr. R. Weir's residence, public supply	7/ 1/19	...	...	...	...	...	...	...	...	...	...	...	...	10	—	—	—	...
Hornell	Tap at A. J. Deer & Cos	7/ 1/19	...	...	...	...	...	...	...	...	...	...	...	...	5	—	—	—	...
Hornell	Raw water at filter plant, public supply	7/11/19	...	...	...	...	...	...	...	...	...	...	...	...	250	+	+	—	...
		7/ 1/19	...	...	...	...	...	...	...	...	...	...	...	...	10	—	—	—	...
Hornell	Reservoir No. 1, public supply	7/11/19	15	25	...	...	.044	.134	.012	.400	2.20	91.40	73.00	4.70	100	+	+	—	...
Hornell	Reservoir No. 2, public supply	7/11/19	15	10	...	...	.054	.124	.008	.800	2.00	91.40	88.00	4.50	950	+	+	—	...
Hornell	Filtered but not chlorinated water, public supply	7/11/19	...	...	...	...	...	...	...	...	...	...	...	...	600	+	+	—	...
Hornell	Tap, filtered and chlorinated water, public supply	7/11/19	...	...	...	...	...	...	...	...	...	...	...	...	40	—	—	—	...
Hornell	Filtered and chlorinated water, public supply	12/1/19	...	...	...	...	...	...	...	...	...	...	...	...	400	—	—	—	...
Hudson (N. Y. State Training School for Girls)	Tap, before filtration	5/27/19	15	Trace	...	...	.004	.074	.001	.060	1.40	32.50	27.00	2.70	40	—	—	—	...
Hudson (N. Y. State Training School for Girls)	Tap, after filtration	5/27/19	...	...	...	...	...	...	...	...	...	...	...	...	10	—	—	—	...
Hudson	Tap at pump house, N. Y. & N. E. Cement & Lime Co.	10/31/19	Trace	...	...	...	.040	.002	.001	.020	11.00	314.50	195.00	.40	10	—	—	—	...
Hudson	Tap at office N. Y. & N. E. Cement & Lime Co.	10/31/19	...	...	...	...	...	...	...	...	...	...	...	...	20	—	—	—	...
Hudson Falls	Tap at pumping station, public supply	6/28/19	20	Trace	...	...	.002	.066	.001	.240	2.00	32.50	30.00	3.70	500	+	+	+	...
Hudson Falls	Tap at Kingsley & Davis drug store, public supply	6/28/19	...	...	...	...	...	...	...	...	...	...	...	...	100	+	+	+	...
Hudson Falls	Tap at office of Water Co	6/28/19	...	...	...	...	...	...	...	...	...	...	...	...	100	+	—	—	...
Hudson Falls	Untreated water at pumping station, public supply	9/ 8/19	20	3	...	...	.024	.054	.002	.360	2.40	36.40	34.00	4.40	2,300	+	+	—	...
Hudson Falls	Treated water at pumping station, public supply	9/ 8/19	...	...	...	...	...	...	...	...	...	...	...	...	550,000	—	—	—	...
Ilion	Intake No. 1, Hawke's Creek, public supply	7/12/19	...	...	...	...	...	...	...	...	...	...	...	...	3,100	+	+	—	...
Ilion	Intake No. 2, Hawke's Creek, public supply	7/12/19	15	15	...	...	.014	.192	.005	.300	2.10	191.40	181.00	8.20	5,300	+	+	+	...
Ilion	Intake No. 3, Litchfield Creek, public supply	7/12/19	...	...	...	...	...	...	...	...	...	...	...	...	100	+	+	—	...
Ilion	Chlorinated water at Venture Meter House, public supply	7/12/19	...	...	...	...	...	...	...	...	...	...	...	...	8	+	+	—	...
Ilion	Heacock Pond on Hawke's Creek, public supply	7/14/19	...	...	...	...	...	...	...	...	...	...	...	...	4,300	+	+	+	...

ANALYTICAL RESULTS OF SAMPLES OF WATER — (Continued)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c.	1 c.c.	1-10 c.c.	1-100 c.c.
Ilion	Tap at City Hall, public supply	7/14/19	5	10			.022	.116	.005	.300	2.00	203.00	169.00	2.50	275	+	+	—	
Ilion	Ditch draining lowland between Ilion and Mohawk	9/12/19	5	3			.008	.180	.006	.060	5.40	235.50	114.00	3.10					
Ilion	Ditch at toe of northern embankment	9/12/19	15	15			.130	.254	.015	.100	4.00	250.00	178.00	9.70					
Ilion	Erie Canal opposite point of collection	9/12/19	10	3			.032	.144	.008	.020	3.60	543.00	175.00	3.90					
Iroquois (Thomas Indian School)	Well	5/ 5/19	10	Trace			.142	.052	.001	Trace	19.00	130.00	202.00	.50	300	—	—	—	
Iroquois (Thomas Indian School)	Spring	5/ 5/19		Trace			.010	.008	.001	Trace	1.00	188.50	182.00	.60	700	—	—	—	
Iroquois (Thomas Indian School)	Tap at Administration building	5/ 5/19													10	—	—	—	
Iroquois (Thomas Indian School)	Pond	5/ 5/19													1,200	—	—	—	
Ithaca (Cornell University)	Raw water	10/11/19	10	10			.020	.082	.003	.020	2.40	142.80		2.50	350	+	+	+	
Ithaca (Cornell University)	Tap	10/11/19	5				.006	.062	.003	.020	2.40	140.00	127.00	2.10	50	—	—	—	
Jamaica	Shallow driven wells, station No. 1, public supply	4/30/19					.046	.022	.030	.800	24.00	122.80	53.00	.20	350	—	—	—	
Jamaica	Shallow driven wells, station No. 2	4/30/19									20.00				5	—	—	—	
Jamaica	Shallow driven wells, station No. 3, public supply	4/30/19					.008	.012	.001	4.00	10.00	44.30	17.00	.30		—	—	—	
Jay	Intake dam	9/12/19													2,700	+	+	—	
Jay	Tap, public supply	9/12/19	30	Trace			.002	.076	.002	.060	.20	55.70	37.00	8.40	8,700	+	+	—	
Johnson City	Test well at Camden st. station	9/27/19					.002	.008	.003	.800	2.80	154.20	149.00	.10	2,900	—	—	—	
Johnson City	New well at pump station	9/27/19					.002	.012	Trace	1.60	15.00	174.00	151.00	.10	2,000	—	—	—	
Johnson City	Old well at power house	9/27/19		Trace			.002	.016	.002	1.20	8.60	177.20	144.00	.50	550	+	+	+	
Johnson City	Tap at pumping station	9/27/19					.002	.010	.005	.200	15.00	168.30	153.00	.50	950	—	—	—	
Johnson City	Tap, public supply	9/27/19													180	—	—	—	
Keene	Tap, public supply	9/ 9/19	Trace	Trace			.004	.010	.001	.200	.80	81.40	81.00	.70	31,000	—	—	—	
Keene Valley	Intake	9/ 9/19													1,200	+	+	—	
Keene Valley	Tap, public supply	9/ 9/19	5	Trace			.012	.036	.001	.020	.20	20.80	20.00	2.90	39,500	+	—	—	
Keeseville	Ausable river, public supply	9/12/19	50	5			.010	.152	.005	.060	1.00	22.10	13.00	21.80	2,300	+	+	+	
Keeseville	Well, auxiliary supply, public supply	9/12/19	5	20			.104	.402	.004	.020	2.00	125.80	119.00	2.80	3,200	+	+	—	

Keeseville	Tap at pumping station, public supply	9/12/19	...	...	...	...	...	...	...	...	...	...	...	...	19,000	+	+	+	...
Kings Park (State Hospital)	Tap in dining room	8/18/19	...	...	...	...	.002	.008	Trace	.300	5.00	14.30	14.00	.30	...	...	...	...	...
Kings Park (State Hospital)	Tap in dining room	11/ 6/19	...	Trace	...	...	.006	.002	...	.200	5.20	22.10	20.00	.70	75	—	—	—	...
Lake George	Emergency reservoir, public supply	6/30/19	...	...	...	...	...	...	...	...	...	...	...	...	11,000	+	+	+	...
Lake George	North reservoir, public supply	6/30/19	35	Trace	...	...	.020	.074	.003	.020	.60	20.80	9.00	7.00	16,000	+	+	+	...
Lake George	South reservoir, public supply	6/30/19	35	Trace	...	...	.008	.082	.003	.020	.60	19.50	9.00	6.20	5,200	+	+	+	...
Lake George	Cobble reservoir, public supply	6/30/19	15	Trace	...	...	.004	.056	.002	.020	.60	19.50	19.00	2.60	2,100	+	+	+	...
Lake George	Tap at Hotel Warren, public supply	6/30/19	...	...	...	...	...	...	...	...	...	...	...	...	1,800	+	+	+	...
Lake George	Tap, public supply	8/28/19	...	...	...	...	...	...	...	...	...	...	...	...	2,709	+	—	—	...
Lake Placid	Water from Lake Placid, public supply	4/ 4/19	...	...	...	...	...	...	...	...	...	...	...	...	42	—	—	—	...
Lake Placid	Tap, public supply	8/ 5/19	...	...	...	...	...	...	...	...	...	...	...	...	10	—	—	—	...
Lake Placid	Raw water, public supply	9/12/19	...	...	...	...	...	...	...	...	...	...	...	...	52,000	—	—	—	...
Lake Placid	Tap, public supply	9/12/19	...	...	...	...	...	...	...	...	...	...	...	...	4,000	—	—	—	...
Lakeville	So-called pump spring, Ramapo Ore Co.	4/12/19	...	...	...	...	...	...	...	...	...	...	...	...	5	—	—	—	...
Lakeville	Office spring	4/12/19	...	...	...	...	...	...	...	...	...	...	...	...	20	—	—	—	...
Lakeville	Whitehead spring	4/12/19	...	...	...	...	...	...	...	...	...	...	...	...	2,600	—	—	—	...
Lakeville	Settling Lake	4/12/19	5	...	...	...	.018	.062	Trace	Trace	1.60	11.10	9.00	1.80	10	—	—	—	...
Lakeville	School well, Ramapo Ore Co	4/12/19	...	...	...	...	...	...	...	...	2.00	...	...	...	35	—	—	—	...
Le Roy	Raw water, public supply	2/22/19	15	5	...	...	.168	.284	.010	.30	6.40	175.50	115.00	6.30	600	+	+	—	...
Le Roy	Filtered and treated water, public supply	2/22/19	...	...	...	...	...	...	...	...	...	...	...	...	375	+	—	—	...
Le Roy	Raw water, public supply	3/27/19	20	35	...	...	.044	.268	.012	.80	6.20	128.60	109.00	6.50	300	—	—	—	...
Le Roy	Filtered and treated water, public supply	3/27/19	10	...	...	...	.018	.130	.003	.80	6.00	122.80	95.00	2.60	35	—	—	—	...
Little Falls	Tap, public supply	3/ 3/19	10	30	...	...	.020	.046	.003	.240	1.20	97.20	97.00	2.60	250	+	—	—	...
Livingston Manor	Overflow of Leneppe Lake, public supply	7/26/19	...	...	...	...	...	...	...	...	...	...	...	...	2,000	+	+	—	...
Livingston Manor	Overflow Mettawa Lake, public supply	7/26/19	45	3	...	...	.060	.224	.003	.010	1.00	20.80	7.00	9.80	450	+	+	—	...
Livingston Manor	Intake reservoir, public supply	7/26/19	60	3	...	...	.012	.246	.003	.040	.60	20.80	11.00	9.50	2,200	+	+	—	...
Livingston Manor	Tap, public supply	7/26/19	50	5	...	...	.014	.194	.003	.060	.60	27.30	8.00	8.10	25,000	+	+	+	...
Livingston Manor	Tap, public supply	7/26/19	40	5	...	...	.014	.174	.003	.060	.80	16.90	10.00	7.00	25,000	+	+	—	...
Livonia	Spring supply, public supply	11/20/19	...	...	...	...	.132	.016	.005	.700	6.00	300.00	257.00	.60	2,700	—	—	—	...
Livonia	Deep well, public supply	11/20/19	10	3	...	...	1.234	.028	Trace	.040	27.00	285.50	282.00	.80	...	—	—	—	...
Livonia	Conesus Lake supply, public supply	11/20/19	5	5	...	...	.010	.176	.010	.060	10.20	114.20	111.00	3.80	300	—	—	—	...
Livonia	Tap, public supply	11/20/19	...	...	...	...	...	...	...	...	...	...	...	...	2,100	—	—	—	...
Lockport	Tap at pumping station, public supply	6/16/19	5	Trace	...	...	.012	.076	...	.060	10.80	94.20	93.00	1.80	40,000	—	—	—	...
Lockport	Tap, public supply	7/ 5/19	...	...	...	...	...	...	...	...	...	...	...	...	50	—	—	—	...
Long Beach	Tap at 28 Bay Boulevard, public supply	6/26/19	...	...	...	...	...	...	...	...	...	...	...	...	300	—	—	—	...
Long Beach	Tap at Drug store Park st. public supply	6/26/19	...	Trace	...	...	.022	.002	.001	2.00	12.00	31.20	9.00	.70	50	—	—	—	...
Lyon Mountain	Reservoir, public supply	11/10/19	...	...	...	...	...	...	...	...	...	...	...	...	550	+	+	+	...
Lyons	Untreated water, public supply	6/ 9/19	...	...	...	...	...	...	...	...	...	...	...	...	9,300	—	—	—	...
Lyons	Tap delivery main, public supply	6/ 9/19	40	Trace	...	...	.012	.276	.007	.20	2.20	214.50	107.00	10.80	190,000	+	—	—	...
Lyons	Big reservoir, public supply	7/11/19	...	...	...	...	...	...	...	...	...	...	...	...	23	+	+	—	...
Lyons	Raw water at pumping station, public supply	7/11/19	25	Trace	...	...	.012	.218	.001	Trace	3.00	203.00	137.00	9.60	50	—	—	—	...
Lyons	Filtered water, public supply	7/11/19	25	...	...	...	.010	.194	Trace	.060	3.00	203.00	132.00	9.30	2	—	—	—	...
Lyons	Tap at Congress Hall, public supply	7/11/19	...	...	...	...	...	...	...	...	...	...	...	...	425	—	—	—	...
Malone	Tap, public supply	6/ 9/19	...	Trace	...	...	.008	.022	.005	1.00	1.20	97.20	87.00	1.60	15,000	+	—	—	...
Manlius	Spring No. 2, auxiliary supply, public supply	10/10/19	...	...	...	...	.004	.014	Trace	1.20	2.00	385.50	203.00	1.00	260	—	—	—	...

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS — Free ammonia	Albuminoid ammonia	Nitrites	Nitrates	Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent) 10 c c	1 c.c.	1-10 c.c.	1-100 c.c.
Manlius	Spring No. 3, auxiliary supply, public supply	10/10/19	....	Trace	....	....	.002	.018	.002	1.00	2.00	371.50	171.00	.20	2	—	—	—	...
Manlius	Tap, public supply	10/10/19	....	Trace	....	....	.004	.020	.001	.300	2.20	228.50	228.00	.40	5	+	—	—	...
Marcy	Marcy brook ⅛ mile east of R. R. station, public supply	2/10/19	....	....	....	....	....	....	....	....	....	....	....	....	80	—	—	—	...
Marcy	Marcy brook at R. R. culvert	2/10/19	....	....	....	....	....	....	....	....	....	....	....	....	230	+	—	—	...
Marcy	Marcy creek where creek enters barge canal	2/10/19	....	....	....	....	....	....	....	....	....	....	....	....	500	+	—	—	...
Marcy	Barge canal on State Hospital ground	2/10/19	10	2	....	....	.026	.072	.012	.300	1.60	52.90	51.00	3.10	180	—	+	—	—
Marlboro	Reservoir, public supply	6/20/19	....	....	....	....	....	....	....	....	....	....	....	....	7,700	+	—	—	...
Marlboro	Tap, public supply	6/20/19	10	40	....	....	.190	.324	.005	.100	2.20	48.60	43.00	3.60	11,000	+	+	—	...
Mechanicville	Tap at 18 Saratoga st., public supply	1/30/19	30	4	....	....	.010	.064	.005	.200	2.20	92.90	84.00	3.70	650	+	+	+	...
Mechanicville	Tap at 415 Court st., public supply	1/30/19	....	....	....	....	....	....	....	....	....	....	....	....	425	+	+	+	...
Mechanicville	Tap, main line ½ mile from pumping station, public supply	2/25/19	5	3	....	....	.014	.078	.003	.100	1.40	105.80	103.00	3.70	10	—	—	—	...
Mechanicville	Tap at paper mill, public supply	2/25/19	....	....	....	....	....	....	....	....	....	....	....	....	2,000	+	+	+	...
Mechanicville	Raw water, public supply	3/ 1/19	15	50	....	....	.020	.080	.010	.060	1.60	117.20	103.00	4.60	2,700	+	+	—	...
Mechanicville	Filtered water at pumping station, public supply	3/ 1/19	10	....	....	....	.014	.060	Trace	.060	1.40	120.00	108.00	3.10	1,200	+	—	—	...
Mechanicville	Tap at Dr. Van Doren's residence, public supply	3/ 1/19	15	10	....	....	.014	.156	.008	.100	2.00	88.60	76.00	5.50	1,100	+	—	—	...
Mechanicville	Malta stream, proposed supply, public supply	5/21/19	5	Trace	....	....	.012	.016	.001	.020	1.40	100.00	100.00	1.00	2,000	—	—	—	...
Mechanicville	Tap, public supply	9/27/19	5	Trace	....	....	.012	.068	.010	.020	1.60	140.00	132.00	2.80	10	+	—	—	...
Menands	Tap, public supply	1/24/19	....	....	....	....	....	....	....	....	....	....	....	....	7	—	—	—	...
Menands	Tap, public supply	2/20/19	....	....	....	....	....	....	....	....	....	....	....	....	5	—	—	—	...
Menands	Tap, public supply	5/14/19	....	....	....	....	....	....	....	....	....	....	....	....	5	—	—	—	...
Menands	Tap, public supply	6/ 3/19	....	....	....	....	....	....	....	....	....	....	....	....	16	+	+	—	...
Menands	Tap, public supply	6/16/19	....	....	....	....	....	....	....	....	....	....	....	....	2	—	—	—	...
Menands	Tap, public supply	8/11/19	....	....	....	....	....	....	....	....	....	....	....	....	100	—	—	—	...
Mexico	Raw water, public supply	8/ 8/19	5	Trace	....	....	.012	.056	.003	.500	1.60	81.40	78.00	3.50	200	+	+	—	...
Mexico	Filtered water, public supply	8/ 8/19	....	....	....	....	.002	.024	Trace	.600	1.60	82.90	80.00	2.90	54,000	+	—	—	...
Mexico	Tap, public supply	8/ 8/19	....	....	....	....	....	....	....	....	....	....	....	....	750	+	+	—	...

Middleport	Barge canal water near intake, public supply	1/23/19	25	10	....	....	.138	.128	.015	.300	13.00	191.40	110.00	3.70	100,000	+	+	+	+
Middleport	Tap at pumping station, public supply	1/23/19	....	....	....	....	....	....	....	....	....	....	....	....	45	—	—	—	...
Middleport	Tap at American Hotel, public supply	1/23/19	....	....	....	....	.008	.048	.003	.200	12.00	364.50	139.00	.10	10	—	—	—	...
Middleport	Tap, Main st., public supply	1/23/19	....	....	....	....	....	....	....	....	....	....	....	....	60	—	—	—	...
Monroe (N. Y. C. S. S. Association Camp)	Spring	6/ 9/19	....	Trace	....	....	.001	.022	Trace	.02	2.20	18.20	18.00	1.00	1,300	+	—	—	...
Monroe	Tap, public supply	8/22/19	15	Trace	....	....	.002	.176	.003	.060	3.20	18.20	18.00	3.80	6,500	+	—	—	...
Montauk Point (U. S. Naval air station)	Drilled well	5/21/19	....	....	....	....	....	....	....	....	....	....	....	....	250	—	—	—	...
Moravia	Tap, public supply	7/14/19	....	....	....	....	....	....	....	....	....	....	....	....	250	—	—	—	...
Mt. Vernon	Tap, public supply	4/26/19	15	Trace	....	....	.006	.072	Trace	.80	11.00	70.00	23.00	2.40	....	...	...	...	...
Napanoch (Eastern N. Y. Reformatory)	Tap	6/ 3/19	....	....	....	....	.002	.016	....	Tracc	1.00	12.70	12.00	1.00	....	—	—	—	...
Newark	Case creek No. 1, public supply	4/11/19	....	....	....	....	....	....	....	....	....	....	....	....	25,500	+	+	+	+
Newark	Case creek No. 2, public supply	4/11/19	....	....	....	....	....	....	....	....	....	....	....	....	34,000	+	+	+	+
Newark	Case creek No. 3, public supply	4/11/19	....	....	....	....	....	....	....	....	....	....	....	....	28,500	+	+	+	+
Newark	Case creek	4/11/19	60	800	....	....	.032	.750	.015	1.60	3.00	145.80	145.00	16.00	....	...	...	...	...
Newark Valley	Spring intake, public supply	9/27/19	1	....	....	....	.006	.008	Trace	.300	1.60	44.30	37.00	1.40	130,000	+	+	+	...
Newark Valley	Pump discharge, public supply	9/27/19	....	Trace	....	....	.002	.002	Trace	.500	2.00	117.20	115.00	.30	....	—	—	—	...
Newark Valley	Tap, public supply	9/27/19	....	....	....	....	....	....	....	....	....	....	....	....	2,100	—	—	—	...
Newburg	Drilled well at shipyard, semi-public supply	8/22/19	....	100	....	....	.116	.004	.005	.020	2.40	149.50	134.00	.30	2,200	+	—	—	...
Newburg	Washington Lake, untreated water, public supply	8/22/19	25	Trace	....	....	.068	.236	.003	.020	1.80	51.40	42.00	5.60	350	—	—	—	...
Newburg	Tap at City Hall, treated water, public supply	8/22/19	....	....	....	....	....	....	....	....	....	....	....	....	....	+	—	—	...
New Paltz	Auxiliary supply, public supply	6/19/19	....	....	....	....	....	....	....	....	....	....	....	....	50	—	—	—	...
New Paltz	Reservoir regular supply, public supply	6/19/19	....	....	....	....	....	....	....	....	....	....	....	....	275	—	—	—	...
New Paltz	Tap, public supply	6/19/19	....	....	....	....	.002	.020	Trace	.020	1.40	68.60	68.00	.90	10	—	—	—	...
New Salem	Spring, public supply	5/16/19	....	....	....	....	....	....	....	....	....	....	....	....	150	+	+	—	...
New Salem	Tap, public supply	5/16/19	5	Trace	....	....	.006	.032	.003	.240	1.20	122.80	117.00	.30	25	+	+	—	...
New York (Manhattan State Hospital at Ward's Island)	Tap in store house	8/15/19	5	Trace	....	....	.006	.074	.001	.100	3.00	37.70	33.00	2.70	70	+	—	—	...
Niagara Falls	Deep well at International Paper Co.	10/24/19	....	....	....	....	....	....	....	....	....	....	....	....	160,000	—	—	—	...
Niagara Falls	Tap in office at International Paper Co., Western N. Y. Water Co. public supply	10/24/19	....	....	....	....	.006	.054	.003	.160	11.00	94.20	92.00	2.70	320,000	—	—	—	...
Niagara Falls	Tap in mill at International Paper Co., municipal supply, public supply	10/24/19	....	Trace	....	....	.006	.052	.001	.060	13.00	91.40	87.00	2.70	5	—	—	—	...
Niagara Falls	Deep well	11/10/19	10	10	....	....	.566	.076	....	.060	73.00	435.00	187.00	2.50	....	...	...	...	...
North Bangor	Tap, public supply	11/24/19	....	....	....	....	.008	.018	.003	1.00	1.40	61.40	56.00	1.40	90	—	—	—	...
North Collins	Tap at Mr. Burk's residence, public supply	7/25/19	....	....	....	....	....	....	....	....	....	....	....	....	180	+	—	—	...
North Collins	Tap at Mrs. Hick's residence, public supply	7/25/19	....	Trace	....	....	.028	.002	.001	2.00	6.20	50.00	27.00	.50	250	+	—	—	...
North Tarrytown	Raw water, public supply	5/10/19	30	Trace	....	....	.034	.122	.010	.100	4.40	39.00	22.00	4.30	110	—	—	—	...
North Tarrytown	Coagulated and settled water effluent, public supply	5/10/19	5	3	....	....	.018	.074	.003	.100	4.40	39.00	10.00	1.80	10	—	—	—	...

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c.	1 c.c.	1-10 c.c.	1-100 c.c.
North Tarrytown	Filtered and chlorinated water, public supply	5/10/19					.014	.042	.001	.160	4.20	39.00	10.00	1.70	1	—	—	—	...
North Tarrytown	Tap, public supply	5/10/19													15	—	—	—	...
North Tonawanda	Tap at No. 217 Miller st., chlorinated water, public supply	1/16/19													650	—	—	—	...
North Tonawanda	Tap at No. 40 Webster st., chlorinated water, public supply	1/16/19													10	—	—	—	...
North Tonawanda	Tap at pumping station chlorinated water, public supply	6/16/19	5	Trace			.018	.070		.060	10.60	94.20	94.00	1.30	29,000	—	—	—	...
North Tonawanda	Tap at No. 217 Miller st., chlorinated water, public supply	6/16/19													19,000	—	—	—	...
North Tonawanda	Tap at No 40 Webster st., chlorinated water, public supply	6/16/19													3,700	+	+	+	...
North Tonawanda	Tap at No. 217 Miller st., 0.25 p. p. m. chlorine applied, public supply	6/24/19													27,500	—	—	—	...
North Tonawanda	Tap at No. 40 Webster st., 0.25 p. p. m. chlorine applied, public supply	6/24/19													60,500	—	—	—	...
North Tonawanda	Tap at No. 40 Webster st., chlorinated water, public supply	8/12/19													15,500	+	—	—	...
North Tonawanda	Intake well	9/19/19													80	+	—	—	...
North Tonawanda	Tap at pumping station chlorinated water, public supply	9/19/19													5,300	+	+	—	...
North Tonawanda	Tap at No. 40 Webster st., public supply	9/19/19													12,000	+	—	—	...
North Tonawanda	Tap at pumping station, public supply	10/11/19													92	—	—	—	...
North Tonawanda	Raw water from crib on intake line, public supply	11/ 3/19													41,500	+	+	+	...
North Tonawanda	Tap at pumping station, chlorinated water, public supply	11/ 3/19													3,900	—	—	—	...
North Tonawanda	Tap at No. 40 Webster st., public supply	11/ 3/19													3,000	—	—	—	...
North Tonawanda	Tap at No. 40 Webster st., Lockport water turned on, public supply	11/24/19													40,000	—	—	—	...
Norwich	Raw water, public supply	7/10/19	25	20			.006	.128	.005	.020	1.20	28.60	28.00	1.90	350	+	+	—	...
Norwich	Filtered water, public supply	7/10/19		Trace			.008	.046	.003	Trace	1.20	54.30	29.00	.80	600	—	—	—	...

Norwood	Overflow at dam, Whitbeck supply, public supply	2/20/19	5	3	....	....	.022	.074	.015	.100	3.00	87.10	75.00	1.90	140	+	—	—	...
Nyack	Perry spring, public supply	4/11/19	....	....	....	....	.022	.052	.003	3.00	9.00	122.80	103.00	.20	30	+	—	—	...
Nyack	Winter Bottom spring, public supply	4/11/19	10	Trace	....	....	.010	.108	Trace	.70	8.00	61.40	61.00	2.70	40	—	—	—	...
Nyack	Raw Hackensack river water, public supply	4/11/19	40	Trace	....	....	.046	.172	.010	.10	4.40	44.30	35.00	6.70	550	+	—	—	...
Nyack	Tap, public supply	4/11/19	20	Trace	....	....	.032	.150	.005	.10	4.40	42.90	38.00	4.70	90	+	—	—	...
Ogdensburg (St. Lawrence State Hospital)	Tap in water softener building, softened water	9/27/19	....	5	....	....	.002	.028	....	.140	12.00	55.90	73.00	2.20	....	—	—	—	...
Ogdensburg (St. Lawrence State Hospital)	Tap in pharmacy	9/27/19	....	....	....	....	.002	.034	....	.100	11.00	128.30	97.00	.80	800	—	—	—	...
Old Forge	Lower reservoir, public supply	11/20/19	....	....	....	....	....	....	....	....	....	....	....	....	600	+	—	—	...
Old Forge	Tap, public supply	11/20/19	45	....	....	....	.008	.122	.010	.300	.60	12.70	12.00	8.00	140	+	—	—	...
Olean	Raw Olean creek water, public supply	7/11/19	5	10	....	....	.050	.088	.005	.060	3.00	100.00	93.00	2.70	....	....	....	....	...
Olean	Filtered Olean creek water, public supply	7/11/19	....	....	....	....	.002	.012	Trace	.060	3.00	100.00	79.00	1.50	....	....	....	....	...
Olean	Tap at No. 330 North Third street, public supply	7/25/19	....	....	....	....	....	....	....	....	....	....	....	....	1,000	+	—	—	...
Olean	Tap at No. 518 Lincoln ave., public supply	7/25/19	....	....	....	....	....	....	....	....	....	....	....	....	420	—	—	—	...
Olean	Tap at No. 1107 Buffalo st., public supply	7/25/19	....	....	....	....	....	....	....	....	....	....	....	....	50	—	—	—	...
Olean	Tap at No. 102 Union st., public supply	7/25/19	....	....	....	....	....	....	....	....	....	....	....	....	8,900	—	—	—	...
Olean	Tap at No. 215 North 13th st., public supply	7/25/19	....	....	....	....	....	....	....	....	....	....	....	....	2,200	+	—	—	...
Olean	Kittaining waterworks, public supply	8/ 2/19	....	....	....	....	....	....	....	....	....	....	....	....	1,500	—	—	—	...
Olean	Filtered but not treated water, public supply	8/ 2/19	....	....	....	....	....	....	....	....	....	....	....	....	1,500	—	—	—	...
Olean	Filtered and treated water, public supply	8/ 2/19	....	....	....	....	....	....	....	....	....	....	....	....	90	—	—	—	...
Olean	Tap at No. 214 W. State st., mixed supply, public supply	8/ 2/19	....	....	....	....	....	....	....	....	....	....	....	....	800	—	—	—	...
Olean	Tap at No. 408 So. Union st., public supply	8/ 2/19	....	....	....	....	....	....	....	....	....	....	....	....	6,700	—	—	—	...
Olean (Rocky Crest Sanatorium)	Well	12/31/19	Trace	3	....	....	.008	.070	....	.500	1.60	90.00	63.00	1.10	....	—	—	—	...
Olean (Rocky Crest Sanatorium)	Spring	12/31/19	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	—	...
Olean (Rocky Crest Sanatorium)	Tap, water from well	12/31/19	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	—	...
Ossining (Sing Sing Prison)	Tap in main kitchen	7/31/19	15	Trace	....	....	.168	.128	.003	1.40	4.60	58.60	42.00	4.00	11,000	+	+	+	...
Ossining (Sing Sing Prison)	Inlet at reservoir in gate chamber	7/31/19	5	Trace	....	....	.002	.086	.001	.200	3.40	41.60	30.00	2.70	300	+	—	—	...
Ossining (Sing Sing Prison)	Reservoir on Pleasantville road	8/23/19	50	Trace	....	....	.030	.238	.003	.060	4.40	31.20	13.00	10.10	100	—	—	—	...
Ossining (Sing Sing Prison)	Raw water, Indian brook reservoir	8/23/19	50	Trace	....	....	.058	.232	.002	.060	3.60	28.60	12.00	11.00	1,700	+	+	+	...
Ossining (Sing Sing Prison)	Chlorinated water	8/23/19	....	....	....	....	....	....	....	....	....	....	....	....	30	—	—	—	...
Oswego	Tap at pumping station, public supply	2/21/19	....	....	....	....	....	....	....	....	....	....	....	....	33	—	—	—	...
Oswego	Tap at City Hall, public supply	2/21/19	5	3	....	....	.012	.056	.006	.10	9.20	100.00	96.00	1.80	2	—	—	—	...
Oswego	Tap at pumping station, public supply	10/30/19	10	20	....	....	.010	.068	.008	.060	11.00	100.00	97.00	2.40	10	—	—	—	...
Oswego	Tap at restaurant at Fort Ontario, public supply	10/30/19	....	....	....	....	....	....	....	....	....	....	....	....	20	—	—	—	...
Owego	Raw well water, public supply	11/19/19	....	....	....	....	.012	.002	Trace	.700	4.40	85.80	84.00	.50	7,500	+	+	+	...
Owego	Raw water from reservoir, public supply	11/19/19	20	40	....	....	.024	.136	.005	.300	2.20	22.10	18.00	4.60	275	+	+	—	...
Owego	Filtered water from reservoir, public supply	11/19/19	15	15	....	....	.006	.094	.003	.300	2.20	22.10	18.00	3.40	60	—	—	—	...

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c.	1 c.c.	1-10 c.c.	1-100 c.c.
Palisades Park	Hazard well, public supply	5/21/19	....	....	....	....	.002	.018	.001	.200	14.00	90.00	22.00	1.20	240	—	—	—	...
Palisades Park	Hazard driven well, public supply	5/21/19	....	....	....	....	.008	.010	.001	.100	11.00	82.90	24.00	.20	1	—	—	—	...
Palisades Park	Bloomer's upper spring, public supply	5/21/19	....	....	....	....	....	....	....	....	....	....	....	....	375	—	—	—	...
Palisades Park	Bloomer's lower spring, public supply	5/21/19	....	....	....	....	.008	.012	.001	.140	13.00	77.10	17.00	.90	20	—	—	—	...
Palisades Park	Alpine spring, public supply	5/21/19	....	....	....	....	.026	.016	.001	.060	9.00	58.60	29.00	.40	1,200	—	—	—	...
Palmyra	Well at main plant, public supply	7/ 8/19	....	....	....	....	.004	.034	....	6.00	9.00	450.00	215.00	1.80	1,100	+	—	—	...
Palmyra	Lower well, public supply	7/ 8/19	....	....	....	....	.002	.042	....	5.00	3.00	278.50	170.00	1.00	240,000	+	+	+	...
Palmyra	New well, not used	7/ 8/19	10	120	....	....	.020	.056	....	Trace	3.40	142.80	172.00	18.00	61,000	+	+	+	...
Palmyra	Tap, public supply	7/ 8/19	....	....	....	....	....	....	....	....	....	....	....	....	30,000	+	+	—	...
Pawling	Upper reservoir, public supply	3/25/19	....	....	....	....	....	....	....	....	....	....	....	....	65	—	—	—	...
Pawling	Lower reservoir, public supply	3/25/19	....	....	....	....	....	....	....	....	....	....	....	....	10	—	—	—	...
Pawling	Tap, public supply	3/25/19	....	....	....	....	.008	.108	.001	.160	1.40	64.30	56.00	2.20	26	+	—	—	...
Philmont	Forest Lake, near intake, public supply	8/ 1/19	5	....	....	....	.010	.136	.001	.020	1.40	20.80	18.00	3.70	25	—	—	—	...
Philmont	Inlet to Forest Lake, chlorinated water, public supply	8/ 1/19	....	....	....	....	....	....	....	....	2.00	....	....	....	250	+	—	—	...
Philmont	Distributing reservoir, public supply	8/ 1/19	....	....	....	....	....	....	....	....	....	....	....	....	2,100	+	—	—	...
Philmont	Tap, public supply	8/ 1/19	....	....	....	....	.002	.086	.001	.020	1.40	20.80	15.00	3.80	300,000	+	—	—	...
Piercefield	Station Brook, public supply	10/ 1/19	120	Trace	....	....	.016	.252	.003	.060	1.00	16.90	10.00	22.60	1,000	+	—	—	...
Piercefield	River water, not treated, public supply	10/ 1/19	35	Trace	....	....	.026	.156	.003	.020	.80	11.10	8.00	7.70	200	+	+	+	...
Piercefield	Tap at hotel, treated water, public supply	10/ 1/19	35	Trace	....	....	.032	.130	.003	.020	.80	11.10	9.00	8.30	375	+	+	+	...
Plattsburg	Mead Brook, not chlorinated, public supply	5/15/19	5	Trace	....	....	.014	.040	.003	.200	.80	128.30	113.00	1.50	450	+	+	—	...
Plattsburg	Reservoir No. 1, not chlorinated, public supply	5/15/19	15	5	....	....	.006	.160	.005	Trace	.40	58.60	58.00	4.90	100	+	—	—	...
Plattsburg	Distributing reservoir, chlorinated water, public supply	5/15/19	10	7	....	....	.010	.158	.005	Trace	.80	58.60	58.00	4.40	120	—	—	—	...
Plattsburg (Junior Camp)	Tap in mess kitchen	8/21/19	....	....	....	....	....	....	....	.040	2.00	....	....	....	50	+	+	—	...
Plattsburg (Junior Camp)	Well No. 1	8/26/19	....	....	....	....	....	....	....	.200	2.00	....	....	....	20	—	—	—	...
Plattsburg (Junior Camp)	Well No. 2	8/26/19	....	....	....	....	....	....	....	.200	34.00	....	....	....	80	+	+	—	...
Plattsburg (Junior Camp)	Well No. 3	8/26/19	....	....	....	....	....	....	....	Trace	98.00	....	....	....	20	+	—	—	...
Plattsburg (Junior Camp)	Well No. 4	8/26/19	....	....	....	....	....	....	....	2.00	4.00	....	....	....	2,600	+	+	+	...
Plattsburg (Junior Camp)	Well No. 5	8/26/19	....	....	....	....	....	....	....	Trace	2.00	....	....	....	25	—	—	—	...

Plattsburg	Reservoir No. 2, water not chlorinated, public supply	8/26/19	15	35	.....	.....	.046	1.120	.003	.040	1.00	91.40	91.00	16.00	14,000	+	—	—	...
Plattsburg	Distributing reservoir, water chlorinated, public supply	8/26/19	15	20	.....	.....	.146	.556	.010	.060	1.00	91.40	91.00	8.80	1,100	+	—	—	...
Plattsburg	Raw, West Brook, reservoir No. 1	9/22/19	15	20	.....	.....	.006	.380	Trace	.060	.60	125.00	98.00	7.80	400	+	+	—	...
Plattsburg	Raw, Scribner pond, public supply	9/22/19	8	Trace	.....	.....	.024	.052	Trace	.060	1.40	132.30	131.00	1.90	1,200	+	+	—	...
Plattsburg	Tap, public supply	9/22/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,300	—	—	—	...
Port Henry	Storage reservoir, public supply	9/ 8/19	25	3	.....	.....	.044	.124	.005	.100	.80	58.60	58.00	5.50	450	+	—	—	...
Port Henry	Reservoir, Witherbee supply, public supply	9/ 8/19	Trace	Trace	.....	.....	.006	.014	.001	.240	3.20	122.80	121.00	2.50	71,500	+	+	—	...
Port Henry	Clear water, well, public supply	9/ 8/19	5	Trace	.....	.....	.056	.086	.002	.040	.80	58.60	58.00	4.20	550	+	+	—	...
Port Jefferson	Tap, public supply	10/ 6/19	.....	.....	.....	.....	002	.002	Trace	.060	5.00	18.20	18.00	.80	.....	.....	.....	.....	...
Potsdam	Haywood spring, public supply	8/ 4/19	.....	.....	.....	.....	.....	.....	.....	.....	1.00	.....	.....	.....	11,000	—	—	—	...
Potsdam	Haywood spring near Forge, public supply	8/ 4/19	.....	.....	.....	.....	.024	.026	Trace	1.20	1.20	77.10	77.00	.70	100,000	+	+	—	...
Potsdam	Barton Creek, public supply	8/ 4/19	5	Trace	.....	.....	.002	.036	Trace	.800	1.20	81.40	81.00	1.50	130,000	+	+	+	...
Potsdam	Tap, public supply	8/ 4/19	60	Trace	.....	.....	.004	.228	.004	.700	1.20	26.00	25.00	16.20	12,000	+	+	+	...
Prattsburg	Reservoir, public supply	8/ 8/19	35	3	.....	.....	.114	.126	.007	.500	1.60	77.10	75.00	3.30	.....	.....	.....	.....	...
Prattsburg	Spring, public supply	8/ 8/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13,000	+	+	—	...
Prattsburg	Tap, public supply	8/ 8/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	59,000	+	+	+	...
Randall's Island (House of Refuge)	Tap	7/29/19	10	Trace	.....	.....	.006	.076	.002	.020	2.40	33.80	29.00	2.60	700	—	—	—	...
Ravena	Raw Hannacroix Creek water at intake, public supply	5/ 8/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	900	+	+	..	...
Ravena	Tap, chlorinated water, public supply	5 /8/19	15	3	.....	.....	.022	.096	Trace	.060	2.40	68.60	58.00	3.00	10	—	—	—	...
Ray Brook	Tap, public supply	1/ 4/19	15	.....	.....	.....	.006	.034	.....	.300	.40	22.10	21.00	4.30	80	—	—	—	...
Red Creek	Tap at pumping station, public supply	2/24/19	.....	.....	.....	.....	.006	.030	.....	2.00	7.80	177.20	124.00	.50	275	—	—	—	...
Red Creek	Tap at Wayne Hotel, public supply	2/24/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,600	—	—	—	...
Red Hook	Foxkill, auxiliary emergency supply, public supply	5/ 9/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,500	+	+	+	...
Red Hook	Tap, public supply	5/ 9/19	.....	.....	.....	.....	.030	.022	.001	.600	2.60	142.80	110.00	.60	10	—	—	—	...
Richfield Springs	Inlet to distributing reservoir, public supply	8/12/19	10	Trace	.....	.....	.002	.142	Trace	.060	.40	44.30	38.00	4.30	150	+	—	—	...
Richfield Springs	Distributing reservoir, near gate house, public supply	8/12/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	800	+	—	—	...
Richfield Springs	Filtered water, public supply	8/12/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	600	—	—	—	...
Richfield Springs	Tap, public supply	8/12/19	Trace	.....	.....	.....	.004	.130	Trace	.060	.40	51.40	49.00	3.10	250	+	—	—	...
Richford	Tap, public supply	9/29/19	.....	Trace	.....	.....	.002	.024	.001	.300	.80	35.10	34.00	.60	38,000	+	+	—	...
Richland (Oswego County Tuberculosis Hospital)	Raw water	8/ 6/19	10	Trace	.....	.....	.004	.102	Trace	.240	1.00	35.10	34.00	3.50	700	+	+	+	...
Richland (Oswego County Tuberculosis Hospital)	Filtered water	8/ 6/19	10	Trace	.....	.....	.002	.092	Trace	.300	1.00	32.50	31.00	2.60	550	+	+	—	...
Rochester	Raw Ontario Lake water, public supply	6/30/19	5	5	.....	.....	.012	.078	.003	.100	10.00	94.30	94.00	.70	5,900	+	+	+	...
Rochester	Coagulating basin effluent R. & O. Lake Ontario water, public supply	6/30/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	—	—	—	...
Rochester	Filter effluent R. & O. Lake Ontario water, public supply	6/30/19	5	Trace	.....	.....	.010	.042	.001	.200	11.00	92.90	84.00	.60	1,200	—	—	—	...

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c	1 c.c.	1-10 c.c.	1-100 c.c.
Rochester	Overflow at Hemlock gate house, public supply	6/30/19	....	....	....	....	....	....	....	....	....	....	....	....	3,100	—	—	—	...
Rochester	Canadice outlet house, public supply	6/30/19	10	Trace	....	....	.020	.056	.003	.200	2.40	100.00	100.00	.90	3,300	+	+	+	...
Rochester	Tap, Hemlock supply, public supply	6/30/19	5	Trace	....	....	.012	.122	.001	.200	2.20	65.70	58.00	1.20	....	...	...	...	...
Rochester	Tap, public supply	7/19/19	5	....	....	....	.002	.064	Trace	.200	2.00	64.30	64.00	2.10	....	—	—	—	...
Rockville Center	Tap, public supply	7/ 7/19	....	....	....	....	.026	.004	.005	7.00	10.00	32.80	12.00	.30	5	—	—	—	...
Rome (State Custodial Asylum)	Pump in kitchen of stock farm	5/ 3/19	....	....	....	....	....	....	....	....	6.00	....	....	....	30	+	+	—	...
Rome (State Custodial Asylum)	Well in barn of stock farm	5/ 3/19	....	....	....	....	....	....	....	....	140.00	....	....	....	1,248,000	+	+	+	...
Rome (State Custodial Asylum)	Cellar pump of stock farm	5/ 3/19	....	....	....	....	....	....	....	....	....	....	....	....	40	+	+	—	...
Rome (State Custodial Asylum)	Well near house at Talcott farm	5/ 3/19	....	....	....	....	....	....	....	....	130.00	....	....	....	2,600	—	—	—	...
Rome (State Custodial Asylum)	Well east of barn at Talcott farm	5/ 3/19	....	....	....	....	....	....	....	....	18.00	....	....	....	230	+	+	—	...
Rome (State Custodial Asylum)	Well at Brush farm	5/ 3/19	....	....	....	....	.004	.016	....	3.00	30.00	195.00	180.00	.70	45	+	+	—	...
Rome (State Custodial Asylum)	Tap, public supply	5/ 3/19	30	Trace	....	....	.006	.076	.010	.100	.80	27.30	22.00	5.40	5	—	—	—	...
Salem	Tap, public supply	9/22/19	Trace	15	....	....	.346	.016	.015	.060	4.40	67.10	57.00	1.30	10	—	—	—	...
Saranac Lake	Reservoir, public supply	9/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	80	—	—	—	...
Saranac Lake	Tap at pumping station, public supply	9/ 9/19	5	Trace	....	....	.006	.112	.001	.020	0.40	27.30	8.00	4.30	35	—	—	—	...
Saratoga Springs	Tap at City Hall, public supply	4/ 1/19	....	....	....	....	....	....	....	....	....	....	....	....	15	—	—	—	...
Saratoga Springs	Tap at shop department, public supply	4/ 1/19	10	Trace	....	....	.028	.106	.001	.080	.40	50.00	50.00	2.40	....	...	...	...	...
Saratoga Springs	Canfield spring	6/17/19	....	....	....	....	....	....	....	....	....	....	....	....	325	—	—	—	...
Saratoga Springs	Casino spring	6/17/19	....	....	....	....	.008	.010	....	5.00	8.00	200.00	185.00	.40	8,600	+	—	—	...
Saratoga Springs	Park fountain	6/17/19	....	....	....	....	....	....	....	....	....	....	....	....	47,000	—	—	—	...
Saratoga Springs	Tap at City Hall, public supply	6/26/19	15	3	....	....	.004	.106	.003	.040	.80	74.30	74.00	1.90	35	+	—	—	...
Saratoga Springs	Tap at public garage, public supply	6/26/19	....	....	....	....	....	....	....	....	....	....	....	....	30	—	—	—	...
Saratoga Springs	Overflow at lake, raw water, public supply	12/ 6/19	....	....	....	....	....	....	....	....	....	....	....	....	25	—	—	—	...
Saratoga Springs	Tap at pump station, chlorinated water, public supply	12/ 6/19	....	....	....	....	....	....	....	....	....	....	....	....	2	—	—	—	...
Saratoga Springs	Tap, public supply	12/ 6/19	....	....	....	....	....	....	....	....	....	....	....	....	2	—	—	—	...
Schuylerville	Intake at reservoir, public supply	3/14/19	....	....	....	....	....	....	....	....	....	....	....	....	50	+	—	—	...
Schuylerville	Tap at pumping station, public supply	3/14/19	....	....	....	....	.014	.018	.001	.70	1.20	90.00	82.00	.70	45	—	—	—	...
Schuylerville	Tap, public supply	12/ 5/19	5	Trace	....	....	.006	.014	....	.500	1.40	94.20	23.00	1.70	140	—	—	—	...

Scotia	Tap at Dr. Wilson's residence; water had passed through tank; public supply	5/ 8/19	....	....	....	....	.004	.004	....	.700	2.80	102.80	88.00	.60	2	—	—	—	...
Scotia	Tap at Mr. Fagel's residence; water had not passed through tank; public supply	5/ 8/19	....	....	....	....	.006	.014	....	.600	2.90	100.00	88.00	.10	5	—	—	—	...
Shortsville	Collecting well, public supply	10/15/19	....	Trace	....	....	.002	.016	.002	.300	2.80	228.50	226.00	.80	350	+	—	—	...
Shortsville	Tap at upper Main street, public supply	10/15/19	....	....	....	....	....	....	....	....	....	....	....	....	25	+	—	—	...
Shortsville	Tap at East Main street, public supply	10/15/19	....	....	....	....	....	....	....	....	....	....	....	....	10	+	—	—	...
Sidney	Collar Brook reservoir, public supply	9/25/19	10	15	....	....	.010	.180	.005	.020	1.20	27.30	26.00	1.70	800	+	+	—	...
Sidney	Peckham reservoir, public supply	9/25/19	20	5	....	....	.012	.214	.005	.020	.40	23.40	16.00	3.90	1,800	+	+	+	...
Sidney	Tap, public supply	9/25/19	....	....	....	....	....	....	....	....	....	....	....	....	300	+	+	—	...
Silver Creek	Tap, public supply	10/24/19	10	3	....	....	.004	.056	.002	.160	4.00	137.20	121.20	2.30	40	+	—	—	...
Skaneateles	Tap at Dr. Wing's residence, public supply	2/21/19	....	Trace	....	....	.020	.084	....	.30	1.40	94.20	91.00	1.20	20	—	—	—	...
Skaneateles	Tap at Hardwick grocery store, public supply	2/21/19	....	....	....	....	.016	.046	.005	.20	1.20	97.20	92.00	1.30	5	—	—	—	...
Skaneateles	Tap, public supply	7/31/19	5	Trace	....	....	.006	.048	.002	.300	1.40	101.50	92.00	1.40	800	+	+	—	...
Skaneateles	Tap, public supply	8/30/19	....	....	....	....	....	....	....	....	....	....	....	....	4,700	—	—	—	...
Skaneateles	Tap, public supply	10/17/19	Trace	Trace	....	....	.018	.058	.001	.200	2.00	108.60	108.00	1.10	300	—	—	—	...
Slingerlands	Reservoir, public supply	10/29/19	5	3	....	....	.004	.084	.005	.400	3.20	160.00	134.00	2.30	2,800	+	+	—	...
Slingerlands	Helderberg spring, public supply	10/29/19	....	....	....	....	....	....	....	....	....	....	....	....	10	+	+	—	...
Slingerlands	Albright spring, public supply	10/29/19	....	....	....	....	....	....	....	....	....	....	....	....	30	+	—	—	...
Smith Mills	Reservoir, public supply	7/25/19	5	15	....	....	.064	.192	.005	Trace	2.80	101.50	100.00	3.10	250	+	+	—	...
Smith Mills	Tap, public supply	7/25/19	....	....	....	....	....	....	....	....	....	....	....	....	650	—	—	—	...
Sodus	Tap No. 1, public supply	5/ 8/19	....	....	....	....	.010	.028	....	1.00	3.20	177.20	174.00	.20	230	—	—	—	...
Sodus	Tap No. 2, public supply	5/ 8/19	....	....	....	....	....	....	....	....	....	....	....	....	5	—	—	—	...
Sodus	Tap at pumping station, public supply	9/ 4/19	5	....	....	....	.020	.006	.001	.500	4.00	203.00	174.00	.30	10	—	—	—	...
Sonyea	Kushaqua creek above the Colony	1/19/19	10	5	....	....	.018	.064	.003	.500	5.20	168.60	143.00	1.20	14,000	[1]—	[2]—	[2]—	...
Sonyea	Tank effluent at disposal plant	1/19/19	....	160	....	....	9.00	....	.008	.060	31.00	....	....	61.00	8,800,000	[3]+	[4]+	[5]+	...
Sonyea	Filter bed effluent at discharge into stream	1/19/19	5	Trace	....	....	.188	.104	.010	1.60	14.00	257.00	183.00	2.00	32,500	[1]+	[2]+	[3]+	[4]—
Sonyea	Stream 300 feet below point of effluent discharge	1/19/19	10	5	....	....	.020	.064	.001	.500	6.00	177.20	123.00	1.60	82,000	[1]+	[2]—	[3]—	...
Sonyea	Stream at White place, ½ mile below point of effluent discharge	1/19/19	5	5	....	....	.024	.068	.001	.500	6.20	162.80	125.00	1.50	125,000	[1]+	[2]+	[3]+	[4]—
Sonyea	Kushaqua creek above Craig Colony	7/11/19	....	Trace	....	....	.010	.040	Trace	.020	7.40	165.80	132.00	1.70	275	[2]+	[1]+	[2]—	[3]—
Sonyea	Tank effluent	7/11/19	100	....	....	....	12.50	....	.005	.060	23.00	....	....	32.00	3,000,000	[2]+	[3]+	[4]+	[5]+
Sonyea	Filter bed effluent	7/11/19	....	15	....	....	4.00	.456	.020	1.40	17.00	203.00	194.00	5.20	24,500	[2]+	[3]+	[4]+	...
Sonyea	Kushaqua stream 300 feet below filter bed outlet	7/11/19	5	Trace	....	....	.090	.070	.030	.240	11.00	174.20	157.00	2.40	40,000	[2]+	[3]+	[4]—	...
Sonyea (Craig Colony)	Kushaqua creek at White place	7/11/19	5	Trace	....	....	.158	.064	.040	.300	10.00	174.20	159.00	2.00	3,300	+	—	—	...
Syracuse (State School for Mental Defectives)	Pump discharge	3/21/19	....	....	....	....	.010	.028	....	2.50	3.20	643.00	255.00	.20	10	+	—	—	...
Syracuse (Fairmont Farm Colony)	Tap in kitchen	3/21/19	....	....	....	....	....	....	....	....	....	....	....	....	100	—	—	—	...

[1] 100 [2] 1,000 [3] 10,000 [4] 100,000

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral res due	NITROGEN AS —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE) (+ = Present (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c.	1 c.c	1-10 c.c.	1-100 c.c.
Syracuse (Fairmont Farm Colony)	Farm well	3/21/19	5	10			.016	.010	.015	1.40	26.00	142.80	263.00	.20	5	—	—	—	
Syracuse (Fairmont Farm Colony)	Tap at main building	6/ 3/19					.008	.052	.003	.40	1.40	91.40	91.00	.80	90	—	—	—	
Syracuse (Fairmont Farm Colony)	Tap in kitchen	6/ 3/19					.002	.018		2.00	1.40	715.00	259.00	.60	5	—	—	—	
Syracuse (Fairmont Farm Colony)	Tap on pump	6/ 3/19													8,500	+	—	—	
Syracuse (Fairmont Farm Colony)	Pump at teamster's cottage	6/ 3/19	10	5			.082	.022	.015	2.40	15.00	142.80	276.00	.20	5	—	—	—	
Theresa	Tap at Kenny's drug store, public supply	8/ 5/19	50	2			.030	.290	.003	.060	1.40	54.30	54.00	11.50	21,500	+	+	—	
Theresa	Tap at railroad station, public supply	8/ 5/19													26,000	—	—	—	
Thiells (Letchworth Village)	South Brook	6/ 3/19													350	+	+	—	
Thiells (Letchworth Village)	North Brook	6/ 3/19													100	—	—	—	
Thiells (Letchworth Village)	Reservoir	6/ 3/19													35	+	—	—	
Thiells (Letchworth Village)	Tap at service building	6/ 3/19													15	—	—	—	
Ticonderoga	Chilson reservoir, public supply	8/12/19	5	Trace			.002	.072	Trace	Trace	.80	74.30	74.00	2.70	12,500	—	—	—	
Ticonderoga	Lake George intake, public supply	8/12/19	10	3			.002	.052	Trace	Trace	1.20	37.70	37.00	2.40	15,500	+	+	—	
Tonawanda	Tap at pumping station, public supply	6/16/19	5	90			.010	.088	Trace	.060	10.60	94.20	93.00	1.20	3,300	+	+	+	
Tonawanda	Tap at pumping station, public supply	7/22/19													4,200	—	—	—	
Tonawanda	Tap at Burtch's drug store, public supply	7/22/19													3,600	+	+	+	
Tonawanda	Tap at Frie's drug store	7/22/19													8,000	+	+	+	
Tonawanda	Tap at City Hall, public supply	8/12/19													16,500	+	+	+	
Tonawanda	Intake, not chlorinated, public supply	9/ 9/19													150,000	+	—	—	
Tonawanda	Tap at pumping station, after chlorination, public supply	9/ 9/19													400,000	—	—	—	
Tonawanda	Johnson well	9/ 9/19													1,100	+	+	+	
Tonawanda	Tap at pumping station, public supply	9/19/19													112,000	—	—	—	
Tonawanda	Raw water, public supply	10/11/19													280,000	+	+	+	
Tonawanda	Chlorinated water, 3⅔ lbs. chlorine per m., applied, public supply	10/11/19														—	—	—	
Tonawanda	Chlorinated water, 4 lbs. per m., applied, public supply	10/11/19													4	—	—	—	

Tonawanda	Tap at City Hall	10/11/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	350	—	—	—	...
Tonawanda	Tap at intake, public supply	10/16/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37,000	+	+	+	...
Tonawanda	Suction well before chlorination, public supply	10/16/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,900	+	+	+	...
Tonawanda	Tap at pumping station after chlorination, public supply	10/16/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35	—	—	—	...
Tonawanda	Raw water at intake, public supply	11/ 3/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51,000	+	+	+	...
Tonawanda	Chlorinated water at pump discharge, public supply	11/ 3/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	—	—	—	...
Tonawanda	Raw water from intake well discharge, public supply	11/24/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21,000	+	—	—	...
Tonawanda	Chlorinated water from pump discharge, public supply	11/24/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	—	—	—	...
Tupper Lake	Simonds pond, public supply	9/24/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	140	+	—	—	...
Tupper Lake	Raquette river auxiliary supply, public supply	9/24/19	35	Trace	.....	.....	.010	.156	Trace	.060	.40	12.70	12.00	7.90	60	+	+	—	...
Tupper Lake	Tap, public supply	9/24/19	35	Trace	.....	.....	.002	.068	.....	.080	1.00	12.70	11.00	8.00	19,000	+	+	—	...
Utica (State hospital	Marcy creek above highway	5/30/17	5	Trace	.....	.....	.070	.104	.002	.100	.80	82.90	55.00	2.70	700	+	+	+	...
Utica (State hospital)	Tap at Woodside farm	5/30/17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	375	+	+	—	...
Utica (State hospital)	Tap at Overlea farm	5/30/17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	300	—	—	—	...
Utica (State hospital)	Tap at main institution	5/30/17	10	3	.....	.....	.086	.028	.001	Trace	7.00	203.00	181.00	.60	60	—	—	—	...
Valatie (State farm)	Well at warden's residence	5/20/19	.....	.....	.....	.....	.....	.....	.....	.....	4.00	.....	.....	.....	1,100	—	—	—	...
Valatie (State farm)	Barn well	5/20/19	.....	.....	.....	.....	.084	.010	.012	3.00	7.00	50.00	35.00	.60	550	—	—	—	...
Valatie (State farm)	Well at Emerson's cottage	5/20/19	.....	Trace	.....	.....	.010	.012	.002	Trace	1.80	94.20	89.00	.30	3,900	—	—	—	...
Valatie (State farm)	Tap, public supply	9/13/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	+	—	—	...
Verbank (Hope farm)	Ice pond	1/ 1/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	200	+	+	—	...
Verbank (Hope farm)	Pond	1/ 1/19	5	.....	.....	.....	.010	.034	.001	.500	3.40	24.70	12.00	1.70	40	+	—	—	...
Verbank (Hope farm)	Tap on main	1/ 1/19	10	.....	.....	.....	.016	.054	.001	.300	3.80	24.70	12.00	2.30	35	—	—	—	...
Voorheesville	Spring, proposed additional supply to present system, public supply	5/ 3/19	.....	.....	.....	.....	.006	.024	.001	.100	1.80	157.20	116.00	1.00	10	—	—	—	...
Voorheesville	Houghton spring, proposed source of supply	5/16/19	.....	Trace	.....	.....	.008	.040	.003	.100	1.40	131.40	126.00	.90	80	+	—	—	...
Voorheesville	Tap, public supply	5/16/19	5	4	.....	.....	.018	.072	.003	.240	1.20	98.60	88.00	2.00	45	—	—	—	...
Wappingers Falls	Tap, public supply	1/11/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45	+	+	—	...
Wappingers Falls	Water before entering filter plant, public supply	8/ 8/19	20	10	.....	.....	.054	.120	.010	.200	2.60	102.80	97.00	4.20	390,000	+	+	—	...
Wappingers Falls	Filtered water just emerging from filter, public supply	8/ 8/19	.....	.....	.....	.....	.004	.084	.003	.240	3.40	102.80	99.00	2.40	10	—	—	—	...
Wappingers Falls	Lake water before filtration, public supply	11/26/19	.....	Trace	.....	.....	.002	.084	.005	.200	2.80	82.90	78.00	2.80	500	+	+	—	...
Wappingers Falls	Tap at Yarner print works, water just after filtration, public supply	11/26/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	—	—	—	...
Wappingers Falls	Tap, filtered water, public supply	11/26/19	.....	.....	.....	.....	.004	.068	.003	.300	2.80	83.20	78.00	2.10	5	—	—	—	...
Wappingers Falls	Tap in village, public supply	11/26/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	—	—	—	..
Wappingers Falls	Tap at Yarner print works, filtered water public supply	11/26/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	—	—	—	..
Warsaw	Tap, public supply	10/23/19	5	Trace	.....	.....	.006	.062	.001	.600	3.00	120.00	116.00	2.70	100	—	—	—	...
Warwick	Reservoir, public supply	7/19/19	.....	.....	.....	.....	.006	.044	Trace	.060	1.60	54.30	54.00	1.90	21,000	—	—	—	...

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c.	1 c.c.	1-10 c.c.	1-100 c.c.
Waterville	Old reservoir, public supply	7/21/19	5	Trace	....	....	.016	.118	.003	Trace	.40	67.10	66.00	2.80	100	+	—	—	...
Waterville	New reservoir, public supply	7/21/19	15	Trace	....	....	.024	.094	Trace	Trace	.40	50.00	31.00	2.10	1,600	—	—	—	...
Watervliet (arsenal)	Tap at hospital, public supply	1/ 3/19	....	....	....	....	....	....	....	....	....	....	....	....	24	—	—	—	...
Watervliet (arsenal)	Tap at mess hall, public supply	1/ 3/19	....	....	....	....	....	....	....	....	....	....	....	....	75	—	—	—	...
Watervliet (arsenal)	Tap at cafeteria, public supply	1/ 3/19	....	....	....	....	....	....	....	....	....	....	....	....	20	—	—	—	...
Watervliet (arsenal)	Tap at guard house, public supply	1/ 3/19	....	....	....	....	....	....	....	....	....	....	....	....	175	—	—	—	...
Watervliet	Tap at City Hall, public supply	1/ 3/19	....	....	....	....	....	....	....	....	....	....	....	....	11	—	—	—	...
Watervliet	Raw Normanskill water at filter plant, public supply	1/17/19	....	....	....	....	....	....	....	....	....	....	....	....	320	+	+	—	...
Watervliet	Filtered Normanskill water at filter plant, public supply	1/17/19	....	....	....	....	....	....	....	....	....	....	....	....	22	+	—	—	...
Watervliet	Filtered and chlorinated Normanskill water, public supply	1/17/19	....	....	....	....	....	....	....	....	....	....	....	....	7	—	—	—	...
Watervliet (arsenal)	Chlorinated Hudson river water, public supply	1/17/19	....	....	....	....	....	....	....	....	....	....	....	....	12	—	—	—	...
Watervliet	Tap at City Hall, public supply	1/17/19	....	....	....	....	....	....	....	....	....	....	....	....	10	—	—	—	...
Watervliet (arsenal)	Chlorinated Hudson river water, at pumping station, public supply	1/24/19	....	....	....	....	....	....	....	....	....	....	....	....	31	—	—	—	...
Watervliet	Tap at City Hall, public supply	1/24/19	....	....	....	....	....	....	....	....	....	....	....	....	38	—	—	—	...
Watervliet	Raw water, public supply	2/20/19	20	15	....	....	.016	.128	.015	.300	2.60	105.80	84.00	3.20	200	—	—	—	...
Watervliet	Filtered water, not chlorinated	2/20/19	....	....	....	....	.032	.110	.002	.300	2.80	97.20	78.00	2.50	20	—	—	—	...
Watervliet	Tap at City Hall, public supply	2/20/19	....	....	....	....	....	....	....	....	....	....	....	....	1	—	—	—	...
Watervliet (arsenal)	Tap at cafeteria, public supply	2/25/19	....	....	....	....	....	....	....	....	....	....	....	....	3	—	—	—	...
Watervliet (arsenal)	Tap at hospital, public supply	2/25/19	....	....	....	....	....	....	....	....	....	....	....	....	20	—	—	—	...
Watervliet (arsenal)	Tap at guard house, public supply	2/25/19	....	....	....	....	....	....	....	....	....	....	....	....	35	—	—	—	...
Watervliet (arsenal)	Tap at new gun shop, public supply	2/25/19	....	....	....	....	....	....	....	....	....	....	....	....	6	—	—	—	...
Watervliet (arsenal)	Tap at small shop, public supply	2/25/19	....	....	....	....	....	....	....	....	....	....	....	....	13	—	—	—	...
Watervliet	Raw water at filter plant, public supply	5/14/19	35	15	....	....	.026	.153	.010	.100	2.00	84.30	57.00	5.20	100	+	+	+	...
Watervliet	Filter effluent at filter plant, public supply	5/14/19	20	Trace	....	....	.014	.100	.001	.100	1.80	84.30	53.00	3.50	80	+	—	—	...

Watervliet	Tap at City Hall, filtered and chlorinated water, public supply	5/14/19	....	....	....	....	....	....	....	....	....	....	....	....	8	—	—	—	...
Watervliet	Filter effluent, not chlorinated, public supply	6/ 3/19	....	....	....	....	....	....	....	....	....	....	....	....	35	+	—	—	...
Watervliet	Tap at 23d street and Third avenue, public supply	6/ 3/19	....	....	....	....	....	....	....	....	....	....	....	....	42	+	—	—	...
Watervliet	Tap at City Hall, public supply	6/ 3/19	....	....	....	....	....	....	....	....	....	....	....	....	31	+	—	—	...
Watervliet	Raw water, Normanskill supply, public supply	6/16/19	20	10	....	....	.014	.130	.001	.100	1.20	77.10	72.00	4.70	650	+	+	—	...
Watervliet	Filter effluent, not chlorinated, public supply	6/16/19	10	Trace	....	....	.012	.128	.001	.140	1.40	75.70	71.00	3.80	5	+	—	—	...
Watervliet	Tap at City Hall, public supply	6/16/19	....	....	....	....	....	....	....	....	....	....	....	....	1	+	—	—	...
Watervliet (arsenal)	Tap at guard house, public supply	6/16/19	....	....	....	....	....	....	....	....	....	....	....	....	39	+	+	+	...
Watervliet	Fountain No. 1, semi-public supply	8/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	10	—	—	—	...
Watervliet	Fountain No. 2, semi-public supply	8/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	—	...
Watervliet	Fountain No. 3, semi-public supply	8/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	10	—	—	—	...
Watervliet	Fountain No. 4, semi-public supply	8/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	5	—	—	—	...
Watervliet	Fountain No. 5, semi-public supply	8/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	20	—	—	—	...
Watervliet	Fountain No. 6, semi-public supply	8/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	20	—	—	—	...
Watervliet	Fountain No. 7, semi-public supply	8/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	25	—	—	—	...
Watervliet	Fountain No. 8, semi-public supply	8/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	10	—	—	—	...
Watervliet	Fountain No. 9, semi-public supply	8/ 9/19	....	....	....	....	....	....	....	....	....	....	....	....	10	—	—	—	...
Watervliet	Raw water, public supply	8/11/19	15	Trace	....	....	.010	.302	.003	.100	2.40	108.60	93.00	7.10	1,800	+	—	—	...
Watervliet	Filtered water, not chlorinated, public supply	8/11/19	10	....	....	....	.002	.150	.001	.100	2.40	108.60	92.00	4.10	800	+	—	—	...
Watervliet	Tap at City Hall, public supply	8/11/19	....	....	....	....	....	....	....	....	....	....	....	....	150	—	—	—	...
Watervliet	Public well at Fifth avenue, between 1st and 2d streets, semi-public supply	8/15/19	....	....	....	....	....	....	....	.12	30.00	....	....	....	50	—	—	—	...
Watervliet	Public well at Second avenue and 6th street, semi-public supply	8/15/19	....	....	....	....	....	....	....	6.00	30.00	....	....	....	120	+	+	—	...
Watervliet	Public well at Broadway and 9th street, semi-public supply	8/15/19	....	....	....	....	....	....	....	12.00	28.00	....	....	....	55	+	—	—	...
Watervliet	Public well at Broadway and 22d street, semi-public supply	8/15/19	....	....	....	....	....	....	....	.20	6.00	....	....	....	150	+	+	—	...
Watervliet	Public well at Fifth avenue and 14th street, semi-public supply	8/15/19	....	....	....	....	....	....	....	12.00	840.00	....	....	....	140	+	+	+	...
Watervliet	Public well at Broadway and 7th street, semi-public supply	8/15/19	....	....	....	....	....	....	....	28.00	52.00	....	....	....	650	+	+	+	...
Watervliet	Public well at Second avenue, between 3d and 4th streets, semi-public supply	8/15/19	....	....	....	....	....	....	....	16.00	26.00	....	....	....	200	+	+	+	...
Watervliet	Public well at Fourth avenue and 7th street, semi-public supply	8/15/19	....	....	....	....	....	....	....	28.00	98.00	....	....	....	550	+	—	—	...
Watervliet	Public well at Seventh avenue, between 7th and 8th streets, semi-public supply	8/15/19	....	....	....	....	....	....	....	.20	14.00	....	....	....	10	—	—	—	...
Watervliet	Raw water at filter plant, public supply	10/24/19	....	....	....	....	....	....	....	....	....	....	....	....	100	—	—	—	...
Watervliet	Tap at City Hall, public supply	10/24/19	....	....	....	....	....	....	....	....	....	....	....	....	3	—	—	—	...

ANALYTICAL RESULTS OF SAMPLES OF WATER — (*Continued*)

CITY, TOWN OR VILLAGE	Source	Date	Color	Turbidity	Residue on evaporation	Mineral residue	NITROGEN AS —				Chlorine	Hardness, total	Alkalinity	Oxygen consumed	Bacteria per c.c.	B. COLI TYPE (+ = Present) (— = Absent)			
							Free ammonia	Albuminoid ammonia	Nitrites	Nitrates						10 c.c.	1 c.c.	1-10 c.c.	1-100 c.c.
West Albany	Spring at N. Y. C. R. R. shops, semi-public supply	9/29/19	....	....	....	....	....	....	....	....	....	....	....	....	45	—	—	—	...
West Albany	Well at N. Y. C. R. R. shops, semi-public supply	11/25/19	....	....	....	....	.196	.092	.015	2.40	16.00	414.50	199.00	3.50	90	—	—	—	...
West Albany	Raw water at West Albany shops	11/25/19	....	....	....	....	....	....	....	....	....	....	....	....	150	+	+	+	...
West Albany	Filtered water at West Albany shops	11/25/19	....	....	....	....	.004	.052	.003	.400	16.00	114.20	92.00	1.70	15	—	—	—	...
West Albany	Filtered well water at N. Y. C. R. R. shops, semi-public supply	11/25/19	....	....	....	....	....	....	....	....	....	....	....	....	650	+	—	—	...
Westfield	Raw water from old pipe line, public supply	2/21/19	....	....	....	....	....	....	....	....	....	....	....	....	110	+	+	+	...
Westfield	Tap at Main street, chlorinated water, public supply	2/21/19	....	....	....	....	....	....	....	....	....	....	....	....	14	+	—	—	...
Westfield	Tap ½ mile from chlorination application, public supply	2/21/19	....	....	....	....	....	....	....	....	....	....	....	....	8	—	—	—	...
Westfield	Tap at Portage Inn, public supply	2/21/19	Trace	3	....	....	.018	.070	.010	.200	2.20	78.00	76.00	.90	12	—	—	—	...
Westfield	Raw creek water, public supply	10/24/19	....	....	....	....	....	....	....	....	....	....	....	....	150	+	+	—	...
Westfield	Tap, chlorinated water, public supply	10/24/19	....	Trace	....	....	.002	.020	.001	.040	2.00	148.60	141.00	1.00	....	—	—	—	...
West Haverstraw (New York State Hospital for Crippled and Deformed Children)	New artesian well	1/30/19	5	Trace	....	....	.052	.052	.003	.060	11.00	121.40	54.00	.20	275	+	+	+	...
West Haverstraw (New York State Hospital for Crippled and Deformed Children)	New drilled well	4/11/19	....	....	....	....	.008	.060	....	.400	3.80	94.20	93.00	.60	3,000	—	—	—	...
West Haverstraw (New York State Hospital for Crippled and Deformed Children)	Tap in main kitchen	4/12/19	10	Trace	....	....	.004	.056	.003	.100	2.40	18.20	18.00	2.20	220	+	—	—	...
West Haverstraw	Reservoir at Thiells, public supply	5/24/19	....	....	....	....	.028	.040	.002	.200	2.80	62.90	62.00	1.40	....	...	...	...	...
West Haverstraw	Tap, public supply	5/24/19	....	....	....	....	....	....	....	....	....	....	....	....	2,700	+	+	—	...
Westport	Tap, public supply	9/ 8/19	....	....	....	....	.002	.008	.001	.080	1.00	54.30	54.00	1.00	92,000	—	—	—	...
White Plains	Driven wells, Drew supply, public supply	7/ 9/19	....	....	....	....	.002	.002	Trace	1.00	9.00	131.40	128.00	.20	2	+	—	—	...
White Plains	Well supply, public supply	7/ 9/19	10	Trace	....	....	.018	.074	.001	.060	3.40	28.60	28.00	1.30	260	—	—	—	...
White Plains	Reservoir, public supply	7/ 9/19	10	Trace	....	....	.008	.114	.001	.020	3.20	16.90	16.00	2.60	12	—	—	—	...

White Plains	Tap, public supply	7/ 9/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	170	—	—	—	...
Whitney Point	Tap at Mr. Newcomb's residence, public supply	9/26/19	.....	.....	.....	.....	.004	.014	Trace	.600	1.20	80.00	80.00	2.50	1,600	+	+	—	...
Whitney Point	Tap at Otselic Inn, public supply	9/26/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,500	+	—	—	...
Williamson	Raw water at intake, public supply	1/ 9/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	140	+	+	—	...
Williamson	Tap at filter plant, treated water, public supply	1/ 9/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	—	—	—	...
Williamson	Tap at health officer's residence, public supply	1/ 9/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	—	—	—	...
Williamson	Tap at filter plant, filtered and treated water, public supply	1/ 9/19	.....		.....	.....	.008	.036	.001	.100	10.40	111.40	72.00	.70	.....	.....	.....	.....	...
Williamson	Intake, public supply	6/12/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,500	+	+	+	...
Williamson	Tap at works, public supply	6/12/19	.....	.....	.....	.....	.010	.074	Trace	.10	11.00	97.20	96.00	2.00	5,500	—	—	—	...
Williamson	Tap at health officer's residence, public supply	6/12/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	220	—	—	—	...
Wilmington	Overflow from intake, public supply	9/12/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,300	+	+	—	...
Wilmington	Tap, public supply	9/12/19	15	Trace	.....	.....	.006	.040	.003	.060	.20	19.50	19.00	3.60	59,000	+	+	—	...
Wingdale (prison)	Tap in spring house at foreman's residence	7/10/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,600	+	+	+	...
Wingdale (prison)	Tap in inmates' washroom, main reservoir supply	7/10/19	5	.....	.....	.....	.002	.050	.001	.020	1.60	100.00	96.00	2.10	10	+	+	—	...
Yonkers	Raw sawmill river water at Woodland lake, public supply	4/10/19	20	3	.....	.....	.046	.164	.015	1.20	8.00	85.70	60.00	3.50	1,000	+	+	+	...
Yonkers	Filtered water at laboratory pump plant, public supply	4/10/19	10	.....	.....	.....	.012	.060	.001	1.20	8.00	88.60	69.00	1.90	5	—	—	—	...
Yonkers	Raw water in filter No. 4	4/10/19	10	4	.....	.....	.032	.198	.010	.500	8.00	88.60	65.00	3.60	1,600	+	+	+	...
Yonkers	Raw water at Grassy Sprain reservoir, public supply	4/10/19	10	5	.....	.....	.016	.164	.008	.500	7.00	48.60	32.00	3.60	30	+	—	—	...
Youngstown	Raw water, public supply	2/24/19	Trace	3	.....	.....	.012	.080	Trace	.060	10.60	97.20	96.00	2.00	23,000	+	+	+	...
Youngstown	Effluent from filter at pumping station, public supply	2/24/19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14,500	+	+	+	...
Youngstown	Tap in village, filtered water, public supply	2/24/19	Trace	3	.....	.....	.016	.070	Trace	.060	10.60	97.20	96.00	2.00	22,500	+	+	+	...

BUREAU OF VENEREAL DISEASES

BUREAU OF VENEREAL DISEASES

Hermann M. Biggs, M. D., *Commissioner of Health, Albany, N. Y.:*

Sir.— I have the honor to submit the following report for the work of the Bureau for the year 1919.

Respectfully yours
JOSEPH S. LAWRENCE
February 14, 1920 *Chief*

The Bureau of Venereal Diseases was organized in July, 1918, for the purpose of combating the spread of syphilis, gonorrhea and chancroid. An appropriation of $30,000 by the State provided for a staff of four physicians and one nurse and a certain sum for the purchase of arsphenamine for the treatment of persons sick with syphilis who, while in the infective stage, are unable to pay for their own treatment. The funds at the disposal of the bureau were very materially augmented by a grant from the Federal government under the Chamberlain-Kahn act which gave the State $99,090.89 to be spent during the fiscal year, July 1, 1918, to June 30, 1919. This appropriation did not become available until December, 1918.

With the assistance of these additional funds the program of the bureau was increased to include four main divisions: legal, educational, medical and repressional. Owing to the prevalence of the epidemic of influenza at the beginning of the year it was thought unwise to attempt much field work, so our efforts were concentrated on securing legal amendments and preparing literature.

Legal

Article 17-b, Sections 343-m and 343-n of the laws of 1918 were amended by chapter 40 of the laws of 1919 making it the duty of the court to see that vagrants are given a thorough medical examination to determine whether they are infected with either syphilis or gonorrhea when arrested instead of after conviction only. Provision was also made for holding such cases until the results of the examinations could be determined.

The sections as amended read:

§ 343-m. *Suspected persons.* Whenever the board of health or health officer of a health district shall have reasonable ground to believe that any person within the jurisdiction of such board or health officer is suffering from, or infected with, any infectious venereal disease and is likely to infect or to be the source of infection of any other person, such board of health or health officer shall cause a medical examination to be made of such person, for the purpose of ascertaining whether or not such person is in fact suffering from, or infected with, such disease, and every such person shall submit to such examination and permit such specimens of blood or bodily discharges to be taken for laboratory examinations as may be necessary to establish the presence or absence of such disease or infection, and such person may be detained until the results of such examinations are known, provided, that the required examination shall be made by the health officer, or, at the option of the person to be examined by a licensed physician who, in the opinion of the health officer, is qualified for this work and is approved by him, and such licensed physician making such examination shall report thereon to the board of health, health department or health officer, but shall not issue a certificate of freedom from venereal disease to or for the person examined. Such suspected person may apply to a magistrate for an order restraining such examination and no examination shall then be made except upon order of such magistrate. Before such examination each suspected person shall be informed of this right and be given an opportunity to avail himself or herself thereof. (Amended by ch. 40, L. 1919; in effect March 12, 1919.)

§ 343-n. *Persons under arrest.* Every person arrested for vagrancy as defined under subdivisions three or four of section eight hundred and eighty-seven of the code of criminal procedure or under section one hundred and fifty of the tenement house law or under any statute or ordinance for any offense of the nature specified in subdivision four of section eight hundred and eighty-seven of the code of criminal procedure, or arrested charged with a violation of section one thousand one hundred and forty-six or one thousand one hundred and forty-eight of the penal law, or any person arrested for frequenting disorderly houses or houses of prostitution, shall be reported within twenty-four hours by the court or magistrate before whom such person is arraigned to the board of health or health officer of the health district in which the alleged offense occurred, and shall be examined in accordance with the provisions of the preceding section. For purpose of examination and diagnosis as provided in the preceding section, such person may be detained until the results of such examination are known. No such person if convicted shall be released from the jurisdiction of such court or magistrate until the person so convicted has been examined as provided for in the preceding section. (Amended by ch. 40, L. 1919; in effect March 12, 1919.)

SUGGESTED RULES AND REGULATIONS FOR THE CONTROL OF VENEREAL DISEASES IN MUNICIPALITIES

Article 17-b as added by Chapter 264, Laws of 1918 authorized the health officers or boards of health to formulate certain rules and regulations for the control in their districts of persons infected with venereal diseases. Such rules and regulations were to be approved by the Commissioner of Health. In order that there might be uniformity the Commissioner suggested the following rules and regulations and submitted them to the various communities for adoption.

Rules and Regulations Governing the Observation, Treatment and Isolation of Cases of Syphilis, Gonorrhea and Chancroid Recommended for Adoption by Municipalities

I. The period of observation and the duration of treatment of cases of syphilis, gonorrhea and chancroid.
   1. Syphilis.
   2. Gonorrhea.
      (a) Gonorrhea in the male.
      (b) Gonorrhea in the female.
   3. Chancroid.

II. Isolation in cases of syphilis, gonorrhea and chancroid.

I. THE PERIOD OF OBSERVATION AND THE DURATION OF TREATMENT OF CASES OF SYPHILIS, GONORRHEA AND CHANCROID

1. *Syphilis*

All persons affected with syphilis shall be kept under continuous medical observation and treatment until all the lesions of the skin and mucous membranes are healed, and until two negative complement-fixation (Wassermann) tests have been made at intervals of not less than one month. Such tests shall be made not less than six months after the disappearance of the initial chancre and not less than two months after the last treatment has been administered.

After two negative specimens have been so obtained, all persons designated in the preceding shall submit specimens of their blood for the complement-fixation (Wassermann) test at intervals of three months for the succeeding two years.

These examinations shall be made in a laboratory or laboratories approved for this purpose by the state commissioner of health.

2. *Gonorrhea*

(a) Gonorrhea in the male.— All males affected with gonorrhea shall be kept under continuous medical observation and treatment until all clinical signs of the disease have disappeared, and until smears from the urethra and prostatic fluid fail morphologically to show gonococci at two consecutive examinations made at an interval of not less than one week, the first smear to be taken at least one week after the last treatment.

These examinations shall be made in a laboratory or laboratories approved for this purpose by the state commissioner of health.

(b) Gonorrhea in the female.—All females affected with gonorrhea shall be kept under continuous medical observation and treatment until all clinical signs of the disease have disappeared, and until smears from urethra, cervix uteri or other foci of gonorrheal infection fail morphologically to show gonococci at two consecutive examinations made at an interval of not less than one week, the first smear to be taken at least one week after the last treatment.

These examinations shall be made in a laboratory or laboratories approved for this purpose by the state commissioner of health.

3. *Chancroid*

All persons presenting the clinical manifestations of chancroid shall be kept under continuous medical observation and treatment until all open lesions are completely healed, and until the laboratory examinations of specimens from such cases have indicated through the lack of evidence of syphilis that the case is one of chancroid and may thus, after the healing of the local lesions, safely be discharged from observation. In cases of combined chancroid and chancre the patient shall be kept under continuous medical observation and treatment until all the lesions of the skin and mucous membranes are healed, and until two negative complement-fixation (Wassermann) tests have been made at intervals of not less than one month. Such tests shall be made not less than six months after the disappearance of the initial lesion, and not less than two months after the last treatment has been administered.

After two negative specimens have been so obtained, all such persons shall submit specimens of their blood for the complement-fixation (Wassermann) test at intervals of three months for the succeeding two years.

These examinations shall be made in a laboratory or laboratories approved for this purpose by the state commissioner of health.

II. ISOLATION IN CASES OF SYPHILIS, GONORRHEA AND CHANCROID

When in the opinion of the health officer it is necessary to safeguard the public, a person affected with syphilis, gonorrhea or chancroid shall be isolated in a hospital, institution or other place designated by the health officer for such period as may be deemed necessary by him.

During the year these rules and regulations were adopted in accordance with section 343-o by the following municipalities:

Albany
Batavia
Berkshire
Bethlehem
Binghamton
Bridgewater
Carthage
Chemung
Cicero
Clayton
Cohocton
Cohoes
Endicott
Fayette
Floral Park
Forestport
Fort Johnson
Glen Cove
Gloversville
Granville
Green Island
Halfmoon
Hartsville
Hastings
Henderson
Highland Falls
Horseheads
Interlaken
Jamestown
Larchmont
Lee
Lima
Livingston
Long Beach
Louisville
Lyons
Madrid
Mechanicville
Middletown
Mohawk
Morrisville
Mt. Kisco
Nelsonville
New Bremen
Newport
New Rochelle
North Tarrytown
North Tonawanda
Ossining
Oswego
Otisco
Ovid
Owego
Oxford
Philipstown
Plattsburg
Port Chester
Poughkeepsie
Richmond
Saranac Lake
Schenectady
Schoharie
Schuylerville
Shelter Island
Southampton
Spencerport
Syracuse
Troy
Utica
Volney
Veteran
Waterford
Willet
Wright
Yorktown

At the same time the Commissioner issued special rules and regulations as he was authorized to do by regulation 2-a of Chapter II of the Sanitary Code, governing the submission of specimens for laboratory examination of cases of syphilis, gonorrhea and chancroid. The special rules and regulations follow:

Special Rules and Regulations Adopted by the State Commissioner of Health Governing the Collection and Submission of Specimens from Cases of Gonorrhea, Syphilis or Chancroid for Laboratory Examination

1. Syphilis.
   (a) Submission of specimens.
   (b) Collection of specimens.

2. Gonorrhea.
   (a) Submission of specimens.
   (b) Collection of specimens.
3. Chancroid.

In accordance with the requirements of regulation 2a, chapter II of the sanitary code, the following rules and regulations are hereby established relating to the collection and submission of specimens for laboratory examination.

THE COLLECTION AND SUBMISSION OF SPECIMENS FOR LABORATORY EXAMINATION

In every case in which there is evidence of syphilis, gonorrhea or chancroid, the attending physician shall submit to the laboratory of the state department of health, or to a laboratory approved for that purpose by the state commissioner of health, the specimens required for examinations listed below, accompanied by the following data: Name, address, age, occupation, and marital condition of the patient, clinical diagnosis, source and date of infection.

1 Syphilis

(a) Submission of specimens.— A physician attending a positive or suspected case of syphilis, shall send, whenever possible, such case to a laboratory where a careful examination of the *exudate* from the chancre or other local lesion with dark field illumination shall be made. The physician shall also submit to a laboratory a specimen of *blood* for the complement-fixation (Wassermann test.)

When laboratory tests of the blood made during the first six weeks after the appearance of the lesion suspected to be a chancre are negative, a further specimen to test the diagnosis shall be submitted between the end of the sixth week and the end of the eighth week following the appearance of the lesion.

A physician attending a case of **constitutional syphilis** (the so-called secondary, latent or tertiary stages of the disease) shall submit to a laboratory a specimen of blood of such case for the complement-fixation (Wassermann) test.

The above examinations shall be made in a laboratory or laboratories approved for this purpose by the state commissioner of health.

(b) *Collection of specimens*

Fresh specimens of exudate from the lesions of syphilis, especially from chancre, which are to be examined with the dark field illumination, shall be taken as follows: Remove a bit of the hard scab, sop the blood until bleeding stops, then squeeze the sore to express a drop of serum. All such specimens should be examined immediately.

Specimens of blood for the complement-fixation (Wassermann) test, consisting of not less than three cubic centimeters, shall be drawn into the sterile tube supplied for this purpose, as described on the blanks which accompany the laboratory outfits.

2 Gonorrhea

(a) *Submission of specimens*

A physician attending a positive or suspected case of **gonorrhea** shall submit the specimens designated below to a laboratory. In those cases in which clinical evidence of the disease is present, and the first laboratory examination was negative, a second specimen shall be submitted.

These examinations shall be made in a laboratory or laboratories approved for this purpose by the state commissioner of health.

(b) *Collection of specimens*

In *acute or active cases* of gonorrhea, specimens of the **urethral discharges** shall be collected in the manner described on the blanks which accompany the laboratory outfits furnished for this purpose.

In the *male,* if **no discharge** is evident, specimens shall be obtained after careful massage of the prostate, by compressing the urethra with the finger and stripping toward the meatus.

In the *female,* if **no urethral discharge** is evident, specimens shall be taken by compressing the urethra with the finger and stripping toward the meatus. Specimens of fresh exudate shall be taken from the cervix uteri, after careful cleansing of the os, and also from Bartholin's glands when it is evident that these are infected.

All specimens of the discharge secured as above indicated shall be smeared at once on the glass slides as described on the blanks accompanying the laboratory outfits furnished for this purpose.

3 Chancroid

Without laboratory tests it is impossible to distinguish with certainty chancroid from chancre, hence all such lesions shall be considered chancre until the complement-fixation (Wassermann) test of the blood is negative.

A physician attending a positive or suspected case of chancroid shall send, whenever possible, such case to a laboratory where a careful examination of the *exudate* from the chancroid or other local lesion, with dark field illumination, shall be made. The physician shall also submit to a laboratory a specimen of *blood* for the complement-fixation (Wassermann) test.

When laboratory tests of the blood made during the first six weeks after the appearance of the lesion suspected to be a chancroid are negative, a further specimen to test the diagnosis shall be submitted between the end of the sixth week and the end of the eighth week following the appearance of the lesion.

The above examination shall be made in a laboratory or laboratories approved for this purpose by the state commissioner of health.

Amendments to Code of Criminal Procedure

Sections 887–889-a and 891-a of the Code of Criminal Procedure were amended so as to define more clearly the terms vagrant and prostitute. Attached are the sections as amended.

CODE OF CRIMINAL PROCEDURE

§ 887. *Who are vagrants.*

The following persons are vagrants:

* * * * * * * * * *

3. A person who has contracted an infectious or other disease, in the practice of drunkenness or debauchery, requiring charitable aid to restore him to health;

4. A person (a) who offers to commit prostitution, or (b) who offers or offers to secure another for the purpose of prostitution

or for any other lewd or indecent act; or (c) who loiters in or near any thoroughfare or public or private place for the purpose of inducing, enticing or procuring another to commit lewdness, fornication, unlawful sexual intercourse or any other indecent act; or (d) who in any manner induces, entices or procures a person who is in any thoroughfare or public or private place, to commit any such acts; or (e) who receives or offers or agrees to receive any person into any place, structure, house, building or conveyance for the purpose of prostitution, lewdness or assignation or knowingly permits any person to remain there for such purposes; or (f) who in any way, aids or abets or participates in the doing of any of the acts or things enumerated in subdivision four of section eight hundred and eighty-seven of the code of criminal procedure; or (g) who is a common prostitute, who has no lawful employment whereby to maintain herself. (Subd. amended by ch. 285, L. 1915, and ch. 502, L. 1919; in effect May 9, 1919.)

§ 889-a. In the trial of any person charged with a violation of subdivision four of section eight hundred and eighty-seven of the code of criminal procedure, testimony concerning the reputation of the place wherein the offense occurred or of persons who frequent or reside therein shall be admissible in evidence in support of the charge. (Added by ch. 502, L. 1919; in effect May 9, 1919.)

§ 891-a. Any person convicted in a city of a violation of subdivision four of section eight hundred and eighty-seven of the code of criminal procedure, shall be committed by the court or judge to any reformatory or house of refuge or other correctional institution for a period not to exceed three years or to a county jail, penitentiary or other penal institution for a period not to exceed one year, or placed on probation for a period not to exceed three years, provided, in the case of a person infected with venereal disease, such probation shall be granted only upon such terms and conditions as shall insure medical treatment of such disease and prevent the spread thereof, and no girl or woman shall be placed on probation except to a woman probation officer where available. The provisions of this subdivision shall not supersede the provisions of chapter six hundred and fifty-nine of the laws of nineteen hundred and ten or any amendment thereto, relating to the commitment of convicted persons. (Subd. added by ch. 502, L. 1919; in effect May 9, 1919.)

Educational

Lectures

Early in the year it was found necessary to increase the lecturing staff and as the work progressed the following persons were added: Dr. F. S. Housinger (lecturer on the original staff), Dr. Helen W. Brown, Dr. Carro Croff, Dr. Esther L. Jefferis, Mrs. M. M. Acker, Lieut. Col. I. W. Brewer, Capt. A. J. Read, Dr. Arthur Guerard and Dr. Edward Clark.

Numerous calls were received from organizations and health officers in various sections of the State asking that lectures similar to those delivered to draftees be given to civilian audiences. The requests for these lectures were received so frequently that no particular effort was made to conduct a specifically outlined educational campaign, but when a call came from any city arrangements were made with as many organizations and industrial plants in that community as could be reached, in order that they should be addressed by the lecturers during their stay in that particular city. In this way frequently a man and woman lecturer would be engaged for two or three days in a single municipality. The lectures given were entirely on venereal diseases, particularly emphasizing the significance of their prevalence as found from the army statistics and discussing their mode of transmission, a description of their pathological lesions, treatment and cure. The meetings were usually limited to members of a single sex; the groups of women and girls being addressed by a woman physician while the boys and men were addressed by men physicians. Occasionally the audiences were mixed, but these were found less satisfactory than the single sex audiences. Opportunity was always given after the meeting to those present to ask questions of the speaker and to consult with him concerning points that were raised by his lecture.

Films

Some excellent films were prepared by the Army and the American Social Hygiene Association for illustrating the manner in which the diseases are contracted and transmitted. A certain number of views of pathological lesions and also of persons suffering with the diseases in various stages formed an important part of these films. They also contained warnings against quack surgeons as well as a description of proper treatment and forecast of cure if cases were discovered early and conscientiously treated. The first of these films prepared by the army called "Fit to Fight" was purchased by the department and used by the lecturers for male audiences. It was a very effective film and added greatly to the value of the lecture. "The End of the Road" was a longer film and more particularly adapted to mixed audiences or audiences of women. The "Fit to Fight" film was modified at the close of the war to make it more suitable for civilian audiences and renamed "Fit to Win." This latter film was not purchased by the State, but it was used several times when loaned by its producer, the Public Health Film Company. Control of these films was secured by a commercial firm which put them into the moving picture circuit and proposed to show them over the State, They were not routed as ordinary pictures, but instead a route was chosen which followed the line of our activities. We were consulted about this and opposed it on the ground that commercial interests and the State and Federal interests would be confused by the general public. The truth of our contention was demonstrated in a few months when it became necessary for us to ask those in charge of the commercial showing of the films to discontinue their work within the State. While this was being done we discontinued the use of the films ourselves so as to prevent any confusion that might arise from our request that the commercial people discontinue their showing.

Where our films were shown the audiences were larger than where no film was used, as will be shown from the following data:

Without Film:

Men	31,426	
Boys	9,840	
Women	13,354	
Girls	9,836	
Total		64,456

With Film:

Men	29,880	
Boys	18,900	
Women	9,815	
Girls	6,770	
Total		65,365
Grand total		129,821

It will be seen from the statistics noted above that the ratio of girls and women attending the lectures was about the same whether the film was used or not, but the proportion of boys attending where the film was shown was far greater than where no film was shown. The places where lectures were given, the dates and attendance are shown by the following tabulation:

PLACE	Date	Attendance
Albany	Feb. 7, 1919	1,500
Albany	Feb. 7, 1919	15 Clubs of Eastern N. Y. and N. J. represented.
Albany	Feb. 24, 1919	1,800
Albany	Feb. 25, 1919	250
Albany	Mar. 5, 1919	283
Albany	Mar. 5, 1919	1,500
Albany	Mar. 6, 1919	1,500
Albany	Mar. 7, 1919	Rotary club — 200.
Albany	Mar. 7, 1919	1,500
Albany	Mar. 25, 1919	60
Albany	April 10, 1919	800
Alfred	May 12, 1919	36
Alfred	May 12, 1919	43
Amsterdam	Feb. 5, 1919	38
Amsterdam	Mar. 21, 1919	1,200
Amsterdam	Oct. 28, 1919	40
Amsterdam	Oct. 29, 1919	15
Amsterdam	Oct. 29, 1919	30
Amsterdam	Oct. 29, 1919	350
Amsterdam	Oct. 30, 1919	450
Amsterdam	Oct. 30, 1919	300
Amsterdam	Oct. 30, 1919	30
Amsterdam	Oct. 30, 1919	50

Place	Date	Attendance	
Amsterdam	Oct. 31, 1919	300	
Amsterdam	Nov. 19, 1919		Heath officers' conference.
Andover	April 8, 1919	30	
Athens	Aug. —, ——	100	
Auburn	Mar. 30, 1919	3,000	Two meetings.
Avon	Feb. 4, 1919	32	
Batavia	Feb. 10, 1919	60	
Batavia	Mar. 3, 1919	220	
Bath	May 7, 1919	130	
Bath	May 7, 1919	150	
Bath	May 13, 1919	48	
Bath	July 12, 1919	60	
Bath	Sept. 23–27, 1919		County fair.
Bath	Oct. 17, 1919		Health officers' conference.
Bath	Dec. 3, 1919	80	
Bath	Dec. 3, 1919	80	
Beacon	May 12, 1919	250	
Beacon	May 12, 1919	250	
Beaver Falls	Nov. 30, 1919	80	
Beaver Falls	Nov. 30, 1919	80	
Binghamton	Feb. 21, 1919	30	
Binghamton	Mar. 7, 1919	250	
Binghamton	Mar. 18, 1919	50	
Binghamton	April 23, 1919	20	
Binghamton	April 28, 1919	60	
Binghamton	April 29, 1919	100	
Binghamton	April 29, 1919	200	
Binghamton	April 29, 1919	200	
Binghamton	April 30, 1919	70	
Binghamton	Oct. 13, 1919	110	
Bronxville	June 13, 1919	8	
Buffalo	Feb. 8, 1919	150	
Buffalo	Mar. 6, 1919	60	
Buffalo	Mar. 11, 1919	250	
Buffalo	April 28, 1919	300	
Buffalo	April 29, 1919	1,200	
Buffalo	April 30, 1919	3,500	
Buffalo	May 1, 1919	4,000	
Buffalo	May 2, 1919	700	
Buffalo	May 3, 1919	1,200	
Buffalo	May 3, 1919	10	
Buffalo	May 19, 1919	150	
Buffalo	June 30, 1919		Erie co. medical society.
Buffalo	July 11, 1919	1,500	
Buffalo	July 14, 1919	1,500	
Buffalo	July 18, 1919	2,000	
Buffalo	Nov. 25, 1919	26	
Buffalo	Nov. 26, 1919	26	
Buffalo	Nov. 28, 1919	26	
Buffalo	Dec. 9, 1919	200	
North Buffalo	Dec. 9, 1919	200	
North Buffalo	Dec. 16, 1919	60	
Cambridge	Aug, —, 1919	100	
Canajoharie	Nov. 14, 1919	200	
Canandaigua	Feb. 11, 1919		Medical society.
Canandaigua	Oct. 23, 1919	14	
Canandaigua	Oct. 23, 1919	13	
Canastota	Feb. 21, 1919	600	
Canisteo	Nov. 15, 1919	41	
Canton	June 3, 1919	40	
Castile	Oct. 31, 1919	45	
Catskill	Nov. 22, 1919	500	
Clyde	Nov. 14, 1919	175	
Cobleskill	Feb. 23, 1919		
Cobleskill	Feb. 23, 1919	300	
Coeymans	Aug. —, 1919	100	
Columbia	Nov. 5, 1919	43	
Corinth	Sept. 23, 1919	350	
Corning	Feb. 14, 1919		Chamber of commerce.
Corning	Mar. 11, 1919		Health officers' conference.
Corning	Mar. 21, 1919	57	
Corning	Nov. 9, 1919	250	
Cortland	Feb. 1, 1919	75	
Cortland	April 20, 1919		
Coxsackie	Sept. 30, 1919	150	
Dansville	Nov. 24, 1919	44	
Delhi	Dec. 3, 1919	165	

PLACE	Date	Attendance	
Delhi	Dec. 8, 1919	125	
Delhi	Dec. 8, 1919	165	
Delmar	May 23, 1919	50	
Depew	June 19, 1919	50	
Depew	June 21, 1919	35	
Depew	July 24, 1919	60	
Depew	July 24, 1919	1,100	
Dunkirk	Mar. 24, 1919	200	
Dunkirk	Mar. 25, 1919	250	
Dunkirk	Mar. 25, 1919	600	
Dunkirk	Mar. 25, 1919	25	
Dunkirk	Mar. 26, 1919	500	
Dunkirk	Mar. 27, 1919	400	
Dunkirk	Mar. 27, 1919	25	
Dunkirk	Mar. 28, 1919	40	
Dunkirk	Mar. 28, 1919	60	
Dunkirk	Mar. 28, 1919	300	
Dunkirk	April 7, 1919	1,400	
Dunkirk	April 7, 1919	900	
Easthampton	Nov. 25, 1919	75	
East Aurora	Feb. 8, 1919	100	
Elmira	Mar. 7, 1919	210	
Elmira	Sept. 30–Oct. 4, 1919		Elmira fair.
Elmira	Oct. 7, 1919	50	
Elmira	Oct. 7, 1919	50	
Elmira	Oct. 7, 1919	40	
Elmira	Oct. 7, 1919	60	
Elmira	Oct. 7, 1919	40	
Elmira	Oct. 7, 1919	200	
Elmira	Oct. 8, 1919	35	
Elmira	Oct. 8, 1919	75	
Elmira	Oct. 8, 1919	55	
Elmira	Oct. 8, 1919	45	
Elmira	Oct. 8, 1919	50	
Elmira	Oct. 8, 1919	40	
Elmira	Oct. 9, 1919	80	
Elmira	Oct. 9, 1919	70	
Elmira	Oct. 9, 1919	50	
Elmira	Oct. 10, 1919	40	
Elmira	Oct. 10, 1919	50	
Elmira	Oct. 10, 1919	90	
Elmira	Oct. 10, 1919	250	
Elmira	Oct. 16, 1919		Health officers' conference.
Elmira	Oct. 12, 1919	50	
Fonda	Oct. 13, 1919	150	
Fort Edward	Sept. 3, 1919	150	
Fort Plain	Mar. 9, 1919	800	
Fort Plain	Mar. 9, 1919	800	
Geneva	April 14, 1919	75	
Glens Falls	Feb. 18, 1919	1,500	
Glens Falls	Mar. 7, 1919	1,000	
Glens Falls	Mar. 27, 1919		
Glens Falls	Mar. 27, 1919		
Glens Falls	Mar. 28, 1919	331	
Glens Falls	Mar. 28, 1919	627	
Glens Falls	Mar. 28, 1919	240	
Glens Falls	Mar. 29, 1919		High school girls.
Gloversville	Feb. 13, 1919	26	
Gloversville	May 4, 1919	120	
Gloversville	Oct. 14, 1919	15	
Gloversville	Oct. 14, 1919	290	
Gloversville	Oct. 14, 1919	150	
Gloversville	Oct. 14, 1919	30	
Gloversville	Oct. 14, 1919	130	
Gloversville	Oct. 14, 1919	50	
Gloversville	Oct. 14, 1919	330	
Gloversville	Oct. 14, 1919	60	
Gloversville	Oct. 14, 1919	175	
Gloversville	Oct. 14, 1919	25	
Gloversville	Oct. 15, 1919	30	
Gloversville	Oct. 15, 1919	50	
Gloversville	Oct. 15, 1919	160	
Gloversville	Oct. 15, 1919	25	
Gloversville	Oct. 15, 1919	50	
Gloversville	Oct. 15, 1919	300	
Gloversville	Oct. 15, 1919	1,500	
Gloversville	Oct. 15, 1919	75	

PLACE	Date	Attendance
Gloversville	Oct. 15, 1919	100
Gloversville	Oct. 15, 1919	75
Gloversville	Oct. 15, 1919	30
Gloversville	Oct. 16, 1919	450
Gloversville	Oct. 16, 1919	300
Gloversville	Oct. 16, 1919	250
Gloversville	Oct. 16, 1919	30
Gloversville	Oct. 16, 1919	40
Gloversville	Oct. 16, 1919	300
Gloversville	Oct. 16, 1919	40
Gloversville	Oct. 16, 1919	35
Gloversville	Oct. 16, 1919	40
Gloversville	Oct. 16, 1919	28
Gloversville	Oct. 16, 1919	175
Gloversville	Oct. 16, 1919	450
Gloversville	Oct. 17, 1919	35
Gloversville	Oct. 17, 1919	125
Gloversville	Oct. 17, 1919	30
Gloversville	Oct. 17, 1919	125
Gouverneur	May 2, 1919	400
Granville	Sept. 2, 1919	100
Great Meadow Prison	May 13, 1919	35 Washington county medical society.
Greenwich	Aug. —, 1919	100
Greenwood	June 4, 1919	32
Hammondsport	Oct. 10, 1919	37
Hancock	Feb. 23, 1919	Women's club.
Hempstead	Feb. 11, 1919	Women's clubs.
Hornell	Mar. 3, 1919	14
Hornell	Mar. 7, 1919	70
Hornell	Mar. 17, 1919	16
Hornell	April 9, 1919	41
Hornell	April 10, 1919	40
Hornell	May 27, 1919	Steuben co. medical society.
Hornell	June 13, 1919	59
Hornell	Oct. 2, 1919	40
Hornell	Oct. 14, 1919	60
Hornell	Nov. 4, 1919	15
Hornell	Dec. 3, 1919	40
Hornell	Dec. 3, 1919	
Hudson	Feb. 17, 1919	
Ithaca	Feb. 12, 1919	
Ithaca	July 24, 1919	203
Ithaca	July 25, 1919	60
Ithaca	Oct. 3, 1919	H. O. conference.
Jamestown	April 1, 1919	130
Jamestown	April 2, 1919	125
Jamestown	April 2, 1919	25
Jamestown	April 2, 1919	200
Jamestown	April 2, 1919	250
Jamestown	April 3, 1919	100
Jamestown	April 3, 1919	250
Jamestown	April 3, 1919	350
Jamestown	April 3, 1919	1,000
Jamestown	April 3, 1919	25
Jamestown	April 3, 1919	25
Jamestown	April 4, 1919	150
Jamestown	April 4, 1919	1,200
Jamestown	April 4, 1919	75
Jamestown	April 4, 1919	160
Jamestown	April 7, 1919	150
Jamestown	April 8, 1919	50
Jamestown	April 8, 1919	30
Jamestown	April 8, 1919	250
Jamestown	April 8, 1919	50
Jamestown	April 8, 1919	25
Jamestown	April 8, 1919	30
Jamestown	April 9, 1919	30
Jamestown	April 9, 1919	160
Jamestown	April 9, 1919	25
Jamestown	April 10, 1919	20
Jamestown	April 10, 1919	75
Jamestown	April 10, 1919	250
Jamestown	April 10, 1919	20
Jamestown	April 11, 1919	100
Jamestown	April 11, 1919	150
Jamestown	Sept. 25, 1919	H. O. conference.

PLACE	Date	Attendance	
Johnstown	Sept. 24, 1919	150	
Kenwood	Feb. 18, 1919		
Kings Park	April 30, 1919		Medical society.
Kingston	Oct. 6, 1919	98	
Kingston	Oct. 6, 1919	80	
Kingston	Oct. 6, 1919	135	
Kingston	Oct. 7, 1919	70	
Kingston	Oct. 7, 1919	20	
Kingston	Oct. 7, 1919	100	
Kingston	Oct. 8, 1919	35	
Kingston	Oct. 8, 1919	25	
Kingston	Oct. 8, 1919	125	
Kingston	Oct. 8, 1919	135	
Kingston	Oct. 8, 1919	45	
Kingston	Oct. 9, 1919	40	
Kingston	Oct. 9, 1919	50	
Kingston	Oct. 9, 1919	500	
Kingston	Dec. 19, 1919		Ulster co. medical society.
Livonia	July —, 1919	49	
Lockport	Feb. 4, 1919	300	
Lockport	Feb. 4, 1919	100	
Lockport	Feb. 5, 1919	200	
Lockport	Feb. 6, 1919	100	
Lockport	Feb. 6, 1919	30	
Lockport	Feb. 6, 1919	150	
Lockport	Feb. 6, 1919	200	
Lockport	Feb. 6, 1919	150	
Lockport	April 30, 1919	75	
Lockport	Oct. 9, 1919	125	
Lowville	June 13, 1919	15	
Lyons	June 15, 1919		
Lyons	Sept. 18–20, 1919		County fair.
Lyons	Nov. 10, 1919	100	
Lyons	Nov. 10, 1919	20	
Lyons	Nov. 10, 1919	350	
Marion	Nov. 13, 1919	43	
Margaretville	June 9, 1919	150	
Margaretville	June 10, 1919		High school girls.
Margaretville	June 10, 1919		High school boys.
Mayville	April 24, 1919	49	
Mechanicville	Mar. 5, 1919	300	
Mechanicville	Aug. —, 1919	100	
Medina	May 8, 1919	80	
Medina	May 8, 1919	32	
Medina	May 8, 1919	34	
Medina	May 8, 1919	40	
Middletown	Feb. 4, 1919		
Middletown	Mar. 2, 1919	1,400	
Middletown	Mar. 3, 1919	10	
Middletown	Mar. 3, 1919	25	
Middletown	Mar. 3, 1919	25	
Middletown	Mar. 4, 1919	200	
Middletown	Oct. 21, 1919		H. O. conference.
Mount Vernon	Mar. 6, 1919	75	
Mount Vernon	Mar. 6, 1919	150	
Mount Vernon	Mar. 8, 1919	150	
Mount Vernon	Mar. 11, 1919		
Mount Vernon	Mar. 16, 1919		
Mount Vernon	Mar. 19, 1919	40	
Mount Vernon	Mar. 19, 1919	40	
Mount Vernon	Mar. 21, 1919	50	
Mount Vernon	Mar. 23, 1919	800	
Newark	July 17, 1919	100	
Newark	Nov. 13, 1919	40	
Newburgh	Feb. 16, 1919		
Newburgh	Feb. 17, 1919	200	
Newfane	June 27, 1919	65	
Newfane	June 27, 1919	75	
Newfane	June 27, 1919	30	
New Rochelle	Feb. 10, 1919		Medical society.
New Rochelle	April 15, 1919	100	
New Rochelle	May 14, 1919	200	
New York City	Feb. 6, 1919	100	
New York City	Nov. 6, 1919		
Oneonta	Mar. 19, 1919	15	
Oneonta	Dec. 1, 1919	30	
Oneonta	Dec. 2, 1919	100	

PLACE	Date	Attendance	
Oneonta	Dec. 2, 1919	60	
Oneonta	Dec. 2, 1919	85	
Oneonta	Dec. 3, 1919	90	
Oneonta	Dec. 3, 1919	125	
Oneonta	Dec. 3, 1919	55	
Oneonta	Dec. 3, 1919	200	
Oneonta	Dec. 3, 1919	40	
Oneonta	Dec. 3, 1919	60	
Oneonta	Dec. 4, 1919	90	
Oneonta	Dec. 5, 1919	75	
Oneonta	Dec. 5, 1919	50	
Oneonta	Dec. 5, 1919	65	
Oneonta	Dec. 5, 1919	100	
Oswego	Feb. 22, 1919		
Oswego	Mar. 16, 1919	1,800	
Ovid	Oct. 10, 1919	35	
Owego	Mar. 4, 1919	12	
Palmyra	July 25, 1919	50	
Palmyra	Sept. 26–27, 1919		County fair.
Palmyra	Nov. 15, 1919	18	
Peekskill	Feb. 19, 1919	200	
Peekskill	Feb. 20, 1919	150	
Peekskill	Feb. 21, 1919	200	
Peekskill	Feb. 24, 1919		
Peekskill	Feb. 26, 1919		
Peekskill	Mar. 9, 1919	600	
Peekskill	April 11, 1919	60	
Peekskill	April 13, 1919	60	
Perry	Oct. 30, 1919	32	
Philmont	Aug. —, 1919	100	
Plattsburg	Mar. 18, 1919	500	
Plattsburg	Nov. 6, 1919		H. O. conference.
Poland	May 8, 1919	50	
Port Chester	Feb. 15, 1919	27	
Port Chester	June 26, 1919	500	
Port Chester	June 27, 1919	75	
Niagara Falls	Mar. 10, 1919	60	
Niagara Falls	Mar. 10, 1919	500	
Niagara Falls	Mar. 11, 1919	125	
Niagara Falls	Mar. 11, 1919	500	
Niagara Falls	Mar. 12, 1919	300	
Niagara Falls	Mar. 12, 1919	1,600	
Niagara Falls	Mar. 12, 1919	100	
Niagara Falls	Mar. 13, 1919	100	
Niagara Falls	Mar. 13, 1919	100	
Niagara Falls	Mar. 13, 1919	1,800	
Niagara Falls	Mar. 14, 1919	125	
Niagara Falls	Mar. 14, 1919	100	
Niagara Falls	Mar. 14, 1919	700	
Niagara Falls	Mar. 15, 1919	600	
Niagara Falls	Mar. 15, 1919	700	
Niagara Falls	Mar. 16, 1919	700	
North Tonawanda	Feb. 2, 1919		
North Tonawanda	Feb. 11, 1919		Chamber of commerce.
North Tonawanda	Feb. 11, 1919	36	
North Tonawanda	May 23, 1919	300	
North Tonawanda	May 26, 1919	200	
North Tonawanda	May 26, 1919	175	
North Tonawanda	May 27, 1919	300	
North Tonawanda	May 27, 1919	60	
North Tonawanda	May 28, 1919	250	
North Tonawanda	May 28, 1919	30	
North Tonawanda	May 28, 1919	175	
North Tonawanda	May 29, 1919	250	
North Tonawanda	May 29, 1919	100	
North Tonawanda	May 31, 1919	1,200	
North Tonawanda	June 3, 1919	50	
Olean	May 13, 1919	15	
Olean	May 13, 1919	25	
Olean	May 14, 1919	40	
Olean	May 14, 1919	500	
Olean	May 14, 1919	115	
Olean	May 14, 1919	75	
Olean	May 16, 1919	15	
Olean	May 15, 1919	25	
Olean	May 15, 1919	20	
Olean	May 15, 1919	160	

PLACE	Date	Attendance
Olean	May 15, 1919	500
Olean	May 15, 1919	400
Olean	May 15, 1919	250
Olean	May 16, 1919	300
Oneida	Feb. 5, 1919	1,200
Poughkeepsie	Feb. 23, 1919	150
Poughkeepsie	Feb. 23, 1919	
Poughkeepsie	Feb. 24, 1919	200
Poughkeepsie	Feb. 24, 1919	50
Poughkeepsie	May 6, 1919	75
Poughkeepsie	May 8, 1919	40
Poughkeepsie	May 9, 1919	250
Poughkeepsie	May 9, 1919	20
Poughkeepsie	May 11, 1919	950
Poughkeepsie	May 12, 1919	50
Poughkeepsie	May 12, 1919	50
Poughkeepsie	May 12, 1919	30
Poughkeepsie	May 13, 1919	40
Poughkeepsie	May 14, 1919	100
Poughkeepsie	May 14, 1919	40
Poughkeepsie	May 14, 1919	30
Poughkeepsie	May 15, 1919	40
Poughkeepsie	May 15, 1919	50
Poughkeepsie	May 15, 1919	20
Poughkeepsie	May 15, 1919	15
Poughkeepsie	May 16, 1919	100
Poughkeepsie	May 21, 1919	50
Poughkeepsie	May 21, 1919	50
Poughkeepsie	May 22, 1919	60
Poughkeepsie	June 7, 1919	20
Poughkeepsie	June 7, 1919	75
Poughkeepsie	June 7, 1919	11
Poughkeepsie	Nov. 5, 1919	20
Poughkeepsie	Nov. 5, 1919	150
Poughkeepsie	Nov. 5, 1919	85
Poughkeepsie	Nov. 5, 1919	65
Poughkeepsie	Nov. 6, 1919	30
Poughkeepsie	Nov. 6, 1919	30
Poughkeepsie	Nov. 6, 1919	400
Poughkeepsie	Nov. 6, 1919	20
Poughkeepsie	Nov. 6, 1919	20
Poughkeepsie	Nov. 6, 1919	250
Poughkeepsie	Nov. 7, 1919	10
Poughkeepsie	Nov. 7, 1919	165
Poughkeepsie	Nov. 7, 1919	150
Prattsburg	May 8, 1919	120
Prattsburg	May 9, 1919	60
Prattsburg	May 9, 1919	50
Ravena	Aug. —, 1919	100
Rexville	June 4, 1919	24
Rochester	Sept. 1-6, 1919	County fair.
Rochester	Sept. 26, 1919	Health officers' conference.
Rochester	Oct. 18, 1919	18
Rochester	Nov. 13, 1919	70
Rome	Sept. 30, 1919	12
Rome	Sept. 30, 1919	50
Rome	Oct. 1, 1919	35
Rome	Oct. 1, 1919	55
Rome	Oct. 2, 1919	150
Rome	Oct. 2, 1919	300
Rome	Oct. 2, 1919	100
Rome	Oct. 2, 1919	200
Rome	Oct. 2, 1919	150
Rome	Oct. 3, 1919	200
Rome	Oct. 3, 1919	300
Rome	Oct. 3, 1919	40
Rome	Oct. 3, 1919	225
Rome	Oct. 3, 1919	65
Rome	Oct. 7, 1919	23
Rome	Oct. 9, 1919	85
Rome	Nov. 20, 1919	Health officers' conference.
Rye	June 30, 1919	25
Salamanca	April 15, 1919	15
Salamanca	April 16, 1919	60
Salamanca	April 16, 1919	80
Salamanca	April 16, 1919	15
Salamanca	April 16, 1919	10

PLACE	Date	Attendance
Salamanca	April 16, 1919	85
Salamanca	April 16, 1919	100
Salamanca	April 17, 1919	125
Salamanca	April 17, 1919	70
Salamanca	April 17, 1919	60
Salamanca	May 20, 1919	19
Salamanca	Sept. 24, 1919	Health officers' conference.
Salamanca	Oct. 6, 1919	78
Saranac Lake	April 27, 1919	700
Saranac Lake	April 27, 1919	850
Saratoga	Mar. 18, 1919	800
Saugerties	Oct. 16, 1919	225
Saugerties	Oct. 17, 1919	250
Schenectady	Feb. 11, 1919	Medical society.
Schenectady	April 15, 1919	
Schuylerville	Aug. — , 1919	100
Seneca County Medical Society	Oct. 9, 1919	
Sidney	Dec. 9, 1919	250
Sidney	Dec. 9, 1919	200
Sidney	Dec. 10, 1919	200
Sidney	Dec. 10, 1919	45
Sidney	Dec. 10, 1919	100
Ossining	April 13, 1919	Sing Sing prison.
Sherman	April 23, 1919	27
Sherman	Oct. 8, 1919	18
Sherman	Oct. 8, 1919	45
Sherman	Oct. 8, 1919	30
Suffern	Feb. 22, 1919	
Sodus	Nov. 11, 1919	100
Sodus	Nov. 11, 1919	150
Sodus	Nov. 11, 1919	60
Sodus	Nov. 11, 1919	100
Springville	May 9, 1919	50
Springville	May 9, 1919	40
Springville	May 9, 1919	150
Stillwater	Aug. —, 1919	100
St. Johnsville	Mar. 2, 1919	450
Syracuse	Mar. 2-3-4-5, 1919	1,400
Syracuse	Sept. 8-13, 1919	State fair.
Syracuse	Sept. 8-13, 1919	County fair.
Syracuse	Sept. 30, 1919	Health officers' conference.
Syracuse	Oct. 24, 1919	Health officers' class.
Tonawanda	May 29, 1919	60
Tonawanda	June 4, 1919	60
Troy	Feb. 17, 1919	
Troy	Feb. 27, 1919	
Troy	Feb. 28, 1919	
Troy	Feb. 28, 1919	
Troy	Mar. 1, 1919	350
Troy	Mar. 10, 1919	90
Troy	Mar. 11, 1919	120
Troy	Mar. 12, 1919	60
Troy	Mar. 13, 1919	290
Utica	Feb. 2, 1919	3,000 (2 meetings.)
Utica	Mar. 17, 1919	
Utica	Mar. 18, 1919	15
Utica	Mar. 20, 1919	300
Utica	April 1, 1919	80
Utica	April 1, 1919	20
Utica	April 3, 1919	75
Utica	April 4, 1919	65
Walton	Dec. 9, 1919	600
Walton	Dec. —, 1919	125
Walton	Dec. 10, 1919	300
Walton	Dec. 12, 1919	75
Wappingers Falls	April 13, 1919	
Warsaw	Dec. 1, 1919	100
Waterford	Aug. —, 1919	100
Wayland	Nov. 25, 1919	21
Wellsville	April 7, 1919	82
Wellsville	Sept. 23, 1919	Health officers' conference.
Wellsville	Oct. 14, 1919	80
Westfield	April 22, 1919	100
Westfield	Oct. 7, 1919	50
Whitehall	Sept. 4, 1919	350

PLACE	Date	Attendance
White Plains	Mar. 6, 1919	15
White Plains	May 11, 1919	600
White Plains	May 25, 1919	800
White Plains	June 26, 1919	25
White Plains	Sept. 23, 1919	Health officers' conference.
White Plains	Sept. 27, 1919	
Williamsburg	April 16, 1919	100
Williamson	Dec. 5, 1919	100
Williamson	Dec. 5, 1919	50
Yonkers	Feb. 11, 1919	
Yonkers	Feb. 11, 1919	
Yonkers	Feb. 12, 1919	
Yonkers	Feb. 15, 1919	
Yonkers	Feb. 27, 1919	30
Yonkers	Feb. 27, 1919	
Yonkers	Feb. 28, 1919	
Yonkers	April 21, 1919	25
Yonkers	April 22, 1919	30
Yonkers	April 23, 1919	30
Yonkers	April 24, 1919	25
Yonkers	April 25, 1919	30
Yonkers	April 26, 1919	25
Yonkers	April 27, 1919	35
Yonkers	April 28, 1919	25
Yonkers	April 29, 1919	100
Yonkers	April 29, 1919	25
Yonkers	April 29, 1919	15
Yonkers	April 30, 1919	20
Yonkers	May 1, 1919	250
Yonkers	May 1, 1919	75
Yonkers	May 2, 1919	25
Yonkers	May 2, 1919	50
Total attendance		117,319

Among the audiences addressed were Rotary Clubs, Y. M. C. A., Y. W. C. A., W. C. T. U., K. of C., Women's Federation of Clubs, Fraternal Organizations, Farm Bureaus, Church Conferences, Associations of Druggists, Associations of Ophthalmologists, Magistrates' Association, etc.

Several of the groups of young men in the State Military Training Commission were addressed at their regular training periods. In twenty-six different cities the men and women in industry were addressed at the plants either during the noon hour or on time allowed by the employer. Twelve different Rotary Clubs were addressed at their regular meetings and in several instances the clubs arranged additional public meetings. High schools were not addressed unless the lecturers were directly invited by the school principal.

Lantern Slides and Exhibits

In addition to the films used for illustrating lectures a number of lantern slides and card exhibits showing pathological lesions were employed. Three card exhibits prepared and recommended by the United States Public Health Service and the American Social Hygiene Association were purchased in quantities and distributed over the State in response to inquiries for exhibits at industrial plants and in club houses or at public meetings. Two of these exhibits consisted of 48 cards; one of them called the "Keeping Fit" exhibit and the other the "Venereal Disease Menace". Each consisted of a certain number of cards showing the normal development of the body, others showing pathological lesions and conditions and some warning against treatment by fakirs or with patent drugs. Suitable frames were secured for these exhibits and during the summer they were set up at the principal agricultural fairs in the State. A physician or nurse accompanied the exhibit to answer questions the public might ask and at the same time hand out literature. At these agricultural fairs a stereomotorgraph was kept in operation, showing selected views from our collection of lantern slides.

At Saratoga, in connection with the Health Officers' Conference, the Division of Public Health Education conducted a demonstration of what a health center should be. The Division furnished a model venereal disease clinic, as a part of the health center, using the equipment from Valatie for demonstrating the methods of diagnosis and treatment. In the waiting rooms to the clinic were placed several exhibits of both cards and lantern slides and stacks of all our various pamphlets, circulars, and report and record forms. Members of the staff were in attendance at the exhibit and treatment rooms continually, conferring with many health officers and physicians on the methods of establishing and conducting educational campaigns and treatment clinics.

Literature

In addition to lectures with films, slides and card exhibits, we prepared certain pamphlets for free distribution. Some others were adopted from other sources and reprinted. Those especially prepared by our department are No. 1, Syphilis, Gonorrhea and Chancroid; No. 2, Facts for Parents; No. 3, Facts for Young Men; No. 4, Facts for Young Women; No. 5, Facts for Public Officials and Business Men. Those reprinted from the Public Health Service pamphlets are No. 6, Keeping Fit; No. 9, Man Power; No. 20, Sex Education. The following were reprinted from pamphlets used by the Training Camp Commission,— No. 23, When The Boys Come Home; No. 7, Your Country Needs You; No. 8, The Nation's Call to Young Women; No. 10, Mothers of America was reprinted from a pamphlet issued by the Minnesota State Board of Health.

Following is a brief review of the pamphlets:

1 SYPHILIS, GONORRHEA AND CHANCROID. Contains a short account of the cause, manner of communication and effects of each disease; a list of precautions to be observed by one infected so that he may protect others and an admonition as to the necessity for prompt and accurate diagnosis, also a portion of the amendment to the domestic relations law.

2 FACTS FOR PARENTS. This pamphlet points out in striking way the effects upon the family, individually and collectively, of any of these diseases. An appeal is made for more adequate education of children in matters of sex.

3 FACTS FOR YOUNG MEN. Contains a warning against quackery. Sex hygiene, self-abuse or masturbation, seminal emissions, and sexual indulgence are each discussed in a paragraph. Syphilis, gonorrhea and chancroid are briefly described and their transmission emphasized. Seven facts to be remembered and a list of books for men are given.

4 FACTS FOR YOUNG WOMEN. Opens with an appeal for frankness; followed by a short description of the female organs of generation. Syphilis, gonorrhea and chancroid are discussed and attention called to the way in which they affect women. A list of books and a series of comparisons between the old and newer methods of educating girls in matters of sex conclude the pamphlet.

5 FACTS FOR PUBLIC OFFICIALS AND BUSINESS MEN. An appeal to common sense is followed by statements of the economic ravages of syphilis and gonorrhea. The extent and the results of syphilis and the control of both of these disease are discussed.

6 DO YOUR BIT TO KEEP HIM FIT. (Out of print): Was a pamphlet reprinted from one distributed by the War Department. An appeal to the citizens to remove the temptation of prostitution from the drafted man and suggestions for suitable facilities for recreation. This pamphlet seemed to lose a great deal of its value with the closing of the war and has been discontinued.

6 KEEPING FIT. Reprinted by permission of the Public Health Service. A general discussion of factors that destroy a man's efficiency is followed by the rules to be observed in developing the healthy body, in the control and conservation of manhood. A very sensible paragraph on relationships with girls closes the booklet.

7 YOUR COUNTRY NEEDS YOU. (A talk with girls): A discussion for girls of the physical changes that take place in their bodies at puberty and after impregnation. Emphasizes the importance to the nation of the proper healthful living of the women of the country. A series of facts on (1) what women have believed, (2) what women know today, and (3) women's duty, cover the last page.

8 THE NATION'S CALL TO YOUNG WOMEN. An appeal to women to consider seriously the preparation that men must undergo to make themselves fit for the army. Urges that they take a similar care and serious view of their importance to the nation. Syphilis and gonorrhea are pointed out as among our greatest enemies.

9 MAN POWER. Reprinted by permission of the Public Health Service. Adapted to boys and men. Syphilis, gonorrhea and chancroid, and the manner of their spread are discussed. A brief description of the generative organs and a warning against masturbation and quacks follow. A discussion of the feasibility of continence and control of the sex impulse completes the pamphlet.

10 MOTHERS OF AMERICA. A pamphlet written by Mabel S. Ulrich, M. D. for the Minnesota State Board of Health and reprinted by us with permission. Dr. Ulrich opens her pamphlet with a statement of facts culled from government reports concerning immorality and its effects upon the youth. She then inquires into the cause of this condition and shows the responsibility of mothers. She urges the mothers to acquaint themselves with sex education and follows with a suggested method of telling a child these truths. A discussion of what a boy and girl should know at different ages closes the pamphlet.

20 THE PROBLEM OF SEX EDUCATION IN SCHOOLS. Reprinted by permission of the Public Health Service. A brief extract of Dr.

Exner's report of the results of his questionnaire to college boys. Neglect of responsibility on the part of the parent and what the teacher is able to do are next discussed. Other subjects treated are Health and Recreation, Emergency Teaching, and Sex Instruction in the curriculum. Work that may be done in the high schools, grammar schools and teachers' colleges is outlined.

23 WHEN THE BOYS COME HOME. A pamphlet reprinted by permission of the Public Health Service. Emphasizes the necessity of being prepared to keep the boys in as good condition after they are discharged from the army as they have been in the service. Strong appeals are made for the elimination of prostitution.

26 Circular of instruction to be given to patients by physicians when a diagnosis of syphilis, gonorrhea or chancroid is made. It contains an abstract of the regulation which classifies these diseases among those considered communicable and another from the domestic relations law. Also detailed instructions to infected persons on how they should conduct themselves, and how they should dispose of their soiled dressings so that they may not infect others. The concluding paragraph mentions the type of laboratory test that should be made to determine the presence of either disease and the value of such test.

Other Publications

A manual entitled " The Modern Treatment of Syphilis, Gonorrhea and Chancroid " was prepared by our consultant, Dr. Marsh. It contains detailed information and directions for making thorough and careful diagnosis of symptoms of all of these diseases and a most accurate description of the methods of preparing arsphenamine for intravenous injection and of the technique of its injection with illustrations of apparatus necessary. The treatment of gonorrhea as well as the most approved methods of testing its efficiency are very carefully described. In an appendix are outlined suggested instructions to be given persons infected with gonorrhea, syphilis or chancroid that will enable them to avoid infecting those with whom they associate.

These manuals are being distributed among the physicians of the State.

A pamphlet "Compilation of laws and regulations relating to Syphilis, Gonorrhea and Chancroid" was prepared containing a collection of the laws and sanitary code regulations that have a bearing upon the control of venereal diseases. The original pamphlet was prepared in 1918 and was revised this year so as to contain the amendments effected by the Legislature.

A copy of this pamphlet was sent to many physicians and lawyers in the State and a copy was also sent to every health commissioner or venereal disease control officer of each State in the Union.

In addition to the above pamphlets the bureau has distributed a number of publications for the U. S. Public Health Service. Among these are V. D. pamphlet No. 40, Nurses Bulletin, a copy of which was sent to every nurse in the State, and the civilian manual for the treatment of syphilis and gonorrhea, a copy of which was sent to every physician in the State who had requested the same by return postal card sent him by the U. S. Public Health Service. V. D. pamphlet No. 36, Open Doors, and V. D. bulletin No. 2, Resposibility of Druggists to the Public Health, were sent to all the druggists in the State.

Our pamphlets were distributed generally in response to requests, to those attending public meetings or to those viewing the exhibits. A careful observation at public meetings and other places where literature was distributed revealed the fact that very few pamphlets were discarded but that all persons receiving the pamphlets carried them carefully away with them. A total of over 1,130,000 pamphlets were printed during the year and 375,000 were reprinted. Of these more than 1,490,000 were distributed during the same time. The distribution was divided among the various pamphlets as shown below:

Pamphlet No. 1, Syphilis, Gonorrhea and Chancroid	217,572
Pamphlet No. 2, Facts for Parents.............	142,888
Pamphlet No. 3, Facts for Young Men..........	209,626
Pamphlet No. 4, Facts for Young Women........	364,872
Pamphlet No. 5, Facts for Public Officials........	133,259
Pamphlet No. 6, Keeping Fit..................	44,746
Pamphlet No. 7, Your Country Needs You.......	39,834
Pamphlet No. 8, The Nation's Call to Young Women	34,848
Pamphlet No. 9, Man Power....................	57,122

Pamphlet No. 10, Mothers of America	14,250
Pamphlet No. 26	5,816
Pamphlet No. 40, Nurses Bulletin	675
Druggists' Bulletins No. 2	16, 115
Druggists' Bulletins No. 36	96, 960
U. S. Manual-Treatment	5,575
Modern Treatment of Syphilis	1, 885
Sex Education	30, 263
Keeping Fit	47, 758
War on Venereal Diseases	6, 744
When They Come Home	18,056
Laws and Regulations	2, 140
Total	1, 490, 329

Placards

Two placards were prepared last year but were not distributed until this year. One was especially prepared for posting in men's lounging rooms and lavatories while another was more particularly adapted for posting where women congregate.

Permission was received in 1918 from the railroad administration to post placards for men in all the stations and coaches of the railways operating in the State. More than 9,000 posters were used in this way. The administration was not willing to permit the same educational measures for the women. During this year these placards have been pretty generally posted in other public places in the State, in factories, hotels, Y. M. C. A.'s, etc. Efforts were made to place advertising posters in trolley cars but this was found too expensive and abandoned. A second set of two posters has been prepared to replace the first.

In all a total of 20,150 posters were printed and 5,523 distributed during the year.

Newspaper Publications

As additional educational work we have used the newspaper columns as much as possible and in order that we might get the most out of these we added to our staff an experienced newspaper man who has assisted very materially. It has been his practice to precede an educational campaign in a city with a series of news articles in the local papers, setting forth the aims of the campaign and soliciting the cooperation of the citizens. While the campaign is on he has numerous reviews and short accounts of the individual meetings. His results have been very satisfactory. Invariably the newspapers have reported of their own accord our largest meetings. In this way very much publicity was given to the work we have done. Clippings from the various newspapers of the State have shown that we have had over 5368 inches of single space in the news columns. Our newspaper man also placed with papers in the towns where the clinics were located advertisements of the clinics, stating their location and the hours when open for reception of patients. These advertisements we have continued in the local papers once or twice a week for several months for each clinic. Reports from some of the cities have told us that the advertisements were exceptionally effective. Clinics when first opened are always advertised until the attendance has become pretty well established and advertising is then stopped for several months but is renewed if the attendance falls off or does not continue to increase. Some difficulty was experienced in certain cities in securing the cooperation of the newspapers in carrying this advertisement. They objected to the use of the words syphilis and gonorrhea. As our educational work has developed these newspapers have had a change of mind and are now willing to carry any advertisements we wish to insert.

Scoring of Cities

Another activity which was converted into an educational influence was that of scoring the cities on their venereal diseases activities in response to request of the U. S. Public Health Service. We discussed with the health officer of each city the rating that his city should have on the various items scheduled in the blanks received from the Public Health Service. This proved very valuable inasmuch as no cities could meet all the requirements but they all expressed eagerness to establish or organize what was necessary in order that they might have a perfect score. The rating of the various cities was quite satisfactory, many of them having above 800 of a possible 1000 points.

Medical

Section 343-q of the Public Health Law provides that only physicians shall treat venereal diseases and that druggists shall sell no drugs for the treatment of syphilis or gonorrhea except on prescription. In order that this might be more thoroughly understood by the druggists a physician was sent during the summer to visit the larger stores of the State. He reported finding the druggists as a whole in a very cooperative mood.

Another piece of educational work, which in a measure was partly medical, was undertaken with the physicians and nurses of the State. An offer was made to each medical society of the State to have the chief of the bureau and a surgeon meet with them at their regular meeting period, the chief to read a paper on the program of the venereal disease bureau while the surgeon would read a paper on the difficulties of correct diagnosis and demonstrate the administration of salvarsan by treating those patients brought to the meeting of the society for this purpose. Dr. James C. Ayer, surgeon of New York city, volunteered his services for this work, for the time being becoming a member of the staff. In several instances he was assisted by Dr. Marsh, our consultant, and Dr. Richmond, our inspector of clinics. A total of thirty-one societies were met, reaching in all about 800 physicians and 200 nurses.

Treatment at Clinics

It was early felt that to make our educational work most efficient it was necessary to have clinics established where concrete demonstration might be given of the efficacy of correct diagnosis. There was a direct demand on the part of the public for places where infected persons could be treated intelligently according to modern methods. Practitioners as a class did not wish to treat venereal diseases in their offices and a few who did treat them did not want it openly known that they were doing so. In the larger cities some qualified physicians were doing the work in connection with either the genito-urinary clinic or the dermatological clinic. On the other hand the quack was thriving on our educational work and it was quite evident that we must, as a Department, immediately provide throughout the State clinics in charge of qualified physicians where individuals could be treated according to modern methods in order that we might demonstrate the viciousness of the quack and the effectiveness of intelligent, conscientious treatment. We approached the health officer or city officials of larger cities with the proposition that if the city could provide a place and physician to take charge of the clinic the Department would equip it. Most of the cities enthusiastically accepted this offer and opened clinics. It was soon discovered that the clinic's efficiency depended largely upon its accessibility and that to be most successful it should be more accessible than hospitals generally are. Therefore, although the hospital dispensary is the logical place for the clinic, it was not considered advisable to establish it there unless the hospital were located in a busy section of the city. In most cities the venereal disease clinic has been housed with one or two other clinics, as for instance the tuberculosis or the child welfare clinic.

There are several definite advantages to be gained by this combination; it is more economical for the city, it admits of the patient consulting more than one clinic at the same visit and it facilitates the transfer of patients from one clinic to another by the physicians in charge. This concentration of several clinics under one roof has led to the building being called a health center and thereby a material gain to public health work is secured, since this arrangement encourages sick people to seek advice at that place. The venereal disease clinic gains by this association because it is possible for patients to come without the observers knowing why they are coming.

Provision was made that the clinic should be open at least two nights and one afternoon in each week. By having clinic periods at night it is possible to utilize the same rooms used by another clinic during the day without interfering with its work. The space for the clinic must consist of at least two rooms, a treating room and a waiting room. Two waiting rooms are recommended, but if sufficient rooms are not available, the hours for treating the men and women must be different so that the two sexes are not obliged to mingle in the waiting room. In most communities it is not necessary as yet to have a clinic open every day in the week. Where the number of patients warrants, as in larger cities, the dispensary has been opened every afternoon. It was discovered quite early in the work that clinics should be opened at night because these patients as a rule are not very ill and go about their regular duties during the day and will come for treatment in the evening if the dispensary is opened at that time. Both syphilis and gonorrhea are, as a rule, treated at each treatment period although in the larger clinics the gonorrhea patients have been told to come at one time and the syphilis patients at another so as to avoid frequent shifting of equipment.

Venereal disease clinics differ from most other clinics in the amount of equipment needed. For the proper treatment of syphilis and gonorrhea an elaborate hospital equipment is required. The rooms must be fitted with running water; toilet facilities must be available, and an operating table, a sterilizing outfit and certain definite instruments are indispensable. Since freshly distilled and sterilized water is perhaps the best medium in which salvarsan can be safely dissolved for intravenous work, a still was considered an important part of the equipment. An immediate examination of discharges from lesions is absolutely necessary for proper diagnosis in early stages of the disease so each equipment has been made to include a microscope with a dark field attachment. It was estimated that to properly fit out a dispensary for venereal disease treatment the following articles were absolutely necessary. A number of other instruments could well be added to increase the efficiency, as for instance, the urethrascope, an ophthalmoscope and a scales.

Furnishings

1 examining table, white enameled.
1 pad for same.
1 dressing table, white enameled.
1 stool, white enameled.
1 instrument wall cabinet, with four shelves.
1 combination instrument, water, and dressing sterilizer.
1 water still.
1 waste basket.

Apparatus

1 Janet-Frank syringe.
30 one-quarter ounce urethral syringes for patients (asepto).
1 one-half ounce urethral syringe for physician's use (asepto).
1 female urethral syringe for physician's use (asepto).
2 scalpels.
2 artery clamps.
1 dressing forceps.
1 vaginal speculum.
1 sponge forceps.
½ dozen surgical needles.
1 trocar and canula.
1 pair straight scissors.
1 grooved director.
1 dermatological curette.
2 white enamel pans.
2 white enamel pus basins.
1 double cylinder gravity apparatus for salvarsan.
2 Graeser needles 18G for salvarsan.
1 Graeser needle 20G for salvarsan.
1 Graeser needle 22G for salvarsan.
2 Luer syringes 2 cc.
1 dozen hypo. needles.
2 Luer needles 19G, 2-inch.
1 deep urethral Luer syringe.
2 silk coude catheters.
1 silk bicoude catheter.
4 silk bougies, Nos. 10, 12, 14, 16F.
5 tunneled sounds, Nos. 9, 10, 11, 13, 15F.
12 steel sounds, Nos. 16, 17, 18, 19, 20, 21, 22, 24, 26, 28, 30, 32F.
6 whale bone filiform bougies.
1 glass irrigator with wall attachment.
1 dozen glass tips for irrigator.
1 Kohlmann dilator, straight.
1 microscope with oil immersion lens.
1 dark field attachment for same.

1 mechanical stage for same.
1 light for same.
3 4-oz. urine glasses.
1 16-oz. graduate.
1 1-oz. graduate.
1 16-oz. Erlenmeyer flask.
1 glass funnel.

The above equipment has been furnished by us to most of the clinics in the State as a subsidy from the Federal appropriation. It has cost approximately $500 for each clinic. In addition to this we have supplied a lock steel file and record cards so that the collection of data at the various clinics may be uniform. Attached blanks are copies of the various cards employed.

Entrance Record

VENEREAL CLINIC AT..........................

Name **Date**
Address
Occupation **Age** **M.S.W.D.**
Diagnosis
Past history
Source of infection
Date, appearance of first symptom
Date, appearance of first symptom **Incubation period**
Present symptoms
Previous treatment
Physical examination
Urine
Microscopic examination
Wassermann test

Daily calendar

DATE

APPOINTMENTS

NAME	NAME

(Front)

DATE

APPOINTMENTS (NOT KEPT)

NAME	NAME

(Back)

Treatment Record

SYPHILIS

Name **Page**

Date	Date next appoint.	Arsphen-amine	Mercury	Iodide	Weight	Urine	Remarks	Wasser-mann

Clinic History Card
SOCIAL SERVICE DEPARTMENT
........................Clinic

Full name
Address

No.
Date

Key No.	Members of household	Patients	Relation to number	Age	Sex	Conjugal condition	Religion	Nationality	Time in U. S.	Time in city	Referred by	Known to

WORK OR SCHOOL RECORD

Key No.	Where employed School How long out of work	Date	Trade process or grade	Hours per week	Wages per week	Employer Foreman Teacher

(Front)

Key No.	NAME	Number of children	Living	Died first year	Number stillbirths	Number miscarriages	Husband or wife infected	Father or mother infected	Is marriage contemplated?	Was circular of instruction given?	Remarks

MEDICAL

Key No.	NAME	DIAGNOSIS		TYPE		Treatment	Date	Laboratory examination	Date	Attending physician	Address
		Syphilis	Gonorrhea	Acute	Chronic						

EXPOSURE

Exposure, date.. Place..

Source of infection.................................... Name.................................... Address.................................... Communicated with.......................patient

....Social worker.

(Back)

NEW YORK STATE DEPARTMENT OF HEALTH — BUREAU OF VENEREAL DISEASES

Case No. INFORMATION CARD FOR SYPHILIS District No.

City, Town or Village County Location

Name Age Sex Color Nationality Marital condition { Single Married Widowed

Occupation Where employed

Exposure: Date Address

Source of infection:
Name Address Marital condition { Single Married Widowed

Previous history: Children No. miscarriages No. stillbirths Died in first year Living Wife infected Parents infected { Father Mother

Present symptoms: Chancre Date of onset Location Rash Date of onset

Glands enlarged: Cervical Axillary Epitrochlear Inguinal

Lesions present or absent and type: Mouth Pharynx

Genitals Skin

Laboratory examination: Date Dark field Smear Wassermann { Blood Spinal fluid

Result of previous examinations: Date Name of laboratory

(Front)

What operations has patient undergone?

Has patient gonorrhea? Tuberculosis?

Has he received circular of instruction? Is marriage contemplated?

Treatment: Date Drug Dose

Remarks:

Name of attending physician Address

(Back)

NEW YORK STATE DEPARTMENT OF HEALTH — BUREAU OF VENEREAL DISEASES

Case No. INFORMATION CARD FOR GONORRHEA District No.

City, Town or Village County Location

Name Age Sex Color Nationality Marital condition { Single Married Widowed

Occupation Where employed

Exposure: Date Address

Source of infection: Name Address Marital condition { Single Married Widowed

Previous history: Children Number of miscarriages Number of stillbirths

Children died in first year Children living Wife infected

Present symptoms: Discharge Date when first noticed

Pain on urination Sediment in urine Rheumatism Pelvic inflammation

Laboratory examination: Date Smear { Cervix uteri. Urethra Complement fixation

Result of previous examinations: Date Name of laboratory

(Front)

What operations has patient undergone?

Has patient had syphilis? Has patient syphilis now? Cystitis?

Has he received circular of instruction? Is marriage contemplated?

Treatment: Date Drug

Remarks:

Name of attending physician Address

(Back)

In addition to the previously named articles, quantities of literature are furnished to each clinic for distribution among the patients, and a set of placards edited by the American Social

Hygiene Association, urging the importance of satisfactory and consistent treatment. It was suggested that these cards be exposed on the walls of the waiting rooms.

Personnel

In many cities, after it was decided that a clinic should be established, it was very difficult to find a physician or surgeon adequately qualified to take charge of the work. The few physicians who were treating these diseases as a part of their general practice usually objected to publicly acknowledging the fact fearing that they might thereby lose some of their patients. It was necessary, therefore, to provide a way for educating certain physicians who were willing to take charge of the clinics, in the latest methods of diagnosing and treating venereal diseases. For this purpose four institutions in New York City (Bellevue Hospital, Out-Patient Dept., the Cornell Clinic, Vanderbilt Clinic and Post Graduate Hospital Clinic) were asked to lend us assistance. They cheerfully agreed to permit the men we recommended to them to work in their clinics for a month or longer as we chose and during that time they gave them individual instruction as well as allowed them to increase their clinical experience at the daily dispensaries. No fee was charged by these institutions for the services they rendered. Nine physicians took the course and a number of others visited the clinics at frequent intervals for a few days at a time. In this way uniformity of methods of diagnosis and treatment was encouraged in the clinics. In some instances physicians who had done considerable of this work in the army were chosen to take charge of the clinics on their return. At a few places the opening of the clinic was postponed until the physicians could secure their discharge from the army.

In addition to the surgeon a nurse is attached to each clinic who assists in preparing the drugs and apparatus. During the day she distills and sterilizes sufficient water for dissolving the arsphenamine and sterilizes the instruments that will be used at the evening clinic. In addition to this she assists in keeping the records and at the suggestion of the physician and under the guidance of the social supervisor does follow-up and inspection work. That there may be uniformity in the conduct of the clinics and the treatment of patients the consultant, the inspector of clinics and the supervising nurse visit all of the clinics at regular intervals, making it a point of being present at one of the clinic periods. On these visits they have been able to offer many valuable suggestions and to encourage the clinic authorities.

Routine Procedure Followed At Clinics

On the occasion of a patient's first visit to the clinic, a careful medical history is taken of his case, particular attention being paid to past and present venereal disease history. He is then given a thorough physical examination, preferably stripped to the knees. Specimens of secretions, excretions, etc. are taken for laboratory examination. If a positive clinical diagnosis be made the patient is put under treatment immediately. In those cases where doubt as to diagnosis exists it may sometimes be necessary to wait for reports from the laboratory before treatment is instituted.

The types of cases seen in the clinics vary. There is the individual who from reading educational pamphlets fears that he may have acquired an infectious venereal disease; there is the type whose mind has been almost unbalanced from too careful reading of quack literature, which exaggerates the evils of masturbation, emissions, etc.; there is the type who has had venereal disease in former years and wishes to know if he has been permanently cured or who wishes to be examined as a preliminary to matrimony; and lastly, there is the individual who is actively infected with syphilis, gonorrhea or chancroid. The first three types must be examined most carefully because prominent symptoms of any venereal disease are usually absent. The individual who has been frightened by the false notions acquired from quack literature is probably the hardest patient to handle. This person is usually of weak mentality, and has become thoroughly convinced that he is suffering with some dire malady. To disabuse his mind is oftentimes one of the most difficult problems with which the syphilologist or urologist has to deal.

The treatment of the actively infective cases is individualized as much as possible, but in dealing with large numbers of cases it necessarily follows that some routine must be followed as a general rule. The syphilitics are given from six to ten intravenous injections of arsphenamine usually at weekly intervals, and intramuscular injections of mercury within the same interval. The mercurial treatment is continued for a period of fifteen weeks. The patient is then given a period of rest from all treatment for one month, at the end of which time a Wassermann test is made of his blood. Regardless of the result of the Wassermann test another similar course of treatment is given during the first year of the patient's illness. Those patients who have shown negative results following the first and second courses of treatment will be given a course of mercury during the second year. Those patients who have shown positive results after the first year's treatment will receive similar treatment during the second year. The later treatment of these cases will depend upon the clinical and serological results following earlier treatment.

The new cases of gonorrhea are instructed to take as much rest and to drink as much fluid as possible, and are treated with one of the organic silver salts or potassium permanganate. Here again treatment must be individualized insofar as this is possible in a clinic. With the chronic cases this is essential, and the treatment therefore will vary according to the pathological lesions, such as stricture, chronic inflammation of some of the small urethral glands, prostatitis, etc., which are disclosed in the examination. In all cases the patient is given instructions as to the measures to be taken by him to prevent others acquiring his disease. Married individuals are urged to see that husband or wife, as the case may be, is examined.

Careful records are kept of the treatment which each patient receives, and records are kept of his attendance at the clinic. Efforts are made to bring back to the clinic such patients as fail to report at their appointed times. In some instances letters suffice; in others it is necessary to make personal visits.

The attending physicians and nurses at the various clinics by their efforts to impress the patient with the seriousness of his condition on the occasion of his first visit may be largely responsible for the continued attendance of the patients. The percentage of patients ceasing treatment against the advice of the physician is very small.

At present there are 40 dispensaries operating in the State outside of New York City. Their location, date of opening, personnel and hours of clinic are as follows:

Venereal Disease Clinics

ALBANY (Albany County). Established January 1, 1919.

South End Dispensary — Ash Grove and Trinity place, Dr. P. W. Harrig. Hours — Wednesday, 8:30 P. M.; Saturdays, 3:30 P. M.; and Tuesdays, 11–12.

Albany Hospital — Dr. John E. Heslin. Established August 9, 1919. Hours — Monday, Wednesday and Saturday, 11–1.

St. Peter's Hospital — Dr. James W. Wiltse. Hours — Monday, Wednesday and Saturday, 11 A. M.; other times by appointments.

AMSTERDAM (Montgomery county). Established September 26, 1919.

Location — 22 Market street. Physician — Howard W. Murphy, M. D. Health Officer — H. M. Hicks, M. D. Nurse — Mrs. Mary A. Finan. Sanitary Supervisor — Jas. Walton, M.D.; Amsterdam. Hours — Tuesday, Friday, 8–10; Saturday, 2–4 P. M.

BATAVIA (Genesee county). Established June 1, 1919.

Location — City Hall, Main street. Physician — Dr. F. D. Carr. Health Officer — J. W. Baker, M. D. Sanitary Supervisor — Edward Clark, Buffalo. Hours — Women, Tuesday and Thursday, 7–8 P. M.; men, Tuesday and Thursday, 8–9 P. M.

BATH (Steuben county). Established November, 1918.

Location — Pleasant Valley Tuberculosis Hospital. Physician — Dr. E. I. Dorn. Sanitary Supervisor — John A. Conway, M. D., Hornell, N. Y.

BINGHAMTON (Broome county). Established April 1, 1919.

Location — 71–73 Collier street. Physician — C. J. Longstreet, M. D. Nurse — Miss Lela Bowman. Health Officer — C. J. Longstreet, M. D. Sanitary Supervisor — John A. Conway, M. D., Hornell. Hours — Monday and Friday, 3–6 P. M.; Wednesday, 3–5 and 7–8 P. M.

BUFFALO, two clinics (Erie county).

Location — Health Center No. 5, 51 Court street. Physician — Dr. A. J. Smith. Miss McClellan, follow-up worker. Mrs. E. F. Busch, clerk. Hours — Daily, 3–5 and 7–8 P. M.

Location — Municipal Hospital, 770 East Ferry street. Physician — Dr. J. D. White. Nurse — Miss S. A. McCann. Hours — Monday, Wednesday and Saturday, Gonorrheal; male, daily. (Dr. W. S. Goodale has charge of clinic reports.) Health Officer — Dr. F. E. Fronczak. Sanitary Supervisor — Edward Clark, M. D., Buffalo.

CORNING (Steuben county). Equipment ordered.

Location — City Hall. Physician — Frank S. Swain, M. D. Hours — Daily except Saturday and Sunday.

DUNKIRK (Chautauqua county). Established April 14, 1919.

Location — Public Health Center, 554 Deer street. Physican — C. E. Hallenbeck, M. D. Nurse — Miss Monroe. Health Officer — G. E. Ellis, M. D. Sanitary Supervisor — J. J. Mahoney, M. D., Jamestown. Hours — Tuesday, Friday, 7–9 P. M.; Thursday, 4–6 P. M.

GLOVERSVILLE (Fulton county). Established March, 1919.

Location — 21 West Fulton street.

Health Officer — A. L. Johnson, M. D. Nurse — Mrs. Lillian H. Haines. Sanitary Supervisor — J. S. Walton, M. D., Amsterdam. Hours — Tuesday, Friday, 7–8 P. M.; Thursday, 4–6 P. M.

GLENS FALLS (Warren county). Established October, 1919.

Location — City Hall, Ridge street. Physican — Dr. M. Maslon. Nurse — Miss Grace C. Briggs, R. N. Health Officer — Virgil D. Selleck, M. D. Sanitary Supervisor — William L. Munson, M. D., Granville. Hours — Tuesday and Friday, 8–9 P. M.

HORNELL (Steuben county).

Location — Health Dispensary, 108 Broadway. Equipment ordered. Physician — Dr. John Conway. Health Officer — B. R. Wakeman, M. D.

HUDSON (Columbia county). Established November 12, 1919.
Location — 232 Warren street. Physician — Dr. W. D. Collins. Nurse — Miss Winifred O'Rourke. Sanitary Supervisor — Dr. P. H. Mason, Peekskill. Hours — Wednesday, 8–9 P. M.

ITHACA (Tompkins County). Established October, 1918.
Location — 125 Farm street. (No clinic physician appointed.) Physician — M. A. Dumond, M. D. Health Officer — H. H. Crum, M. D. Sanitary Supervisor — John A. Conway, M. D., Hornell. Hours — No regular time. Board of health or city officials send patients to office when they need attention.

JAMESTOWN (Chautauqua county). Established February, 1919.
Location — 507 Washington street. (Physician's office.) Physician — C. F. Ormes, M. D. Health Officer — J. J. Mahoney, M. D., Jamestown. Sanitary Supervisor — J. J. Mahoney, M. D. Hours — Tuesday and Friday, 1–4 P. M., and Tuesday, 7–8 P. M.

JOHNSTOWN (Fulton county).
Location — 10 South William street. Established March 1, 1919. (Physician appointed, no clinic). Physician — Austin Hogan, M. D. Health Officer — Dr. Frank Neuendorf. Sanitary Supervisor — James S. Walton, Amsterdam, N. Y. Hours — Tuesday and Thursday, 1–2 and 7–8 P. M.

KINGSTON (Ulster county). Established June 15, 1919.
Location — 74 John street. Physician — Frank A. Johnston, M. D. Health Officer — Frank A. Johnston, M. D. Sanitary Supervisor — F. W. Laidlaw, M. D., Hurleyville. Hours — Monday and Friday, 7–9 P. M. Nurse — Mrs. Mary O'Neill.

LITTLE FALLS (Herkimer county). Established July, 1919.
Location — 539 Albany street. (No clinic.) Physician — Dr. H. W. Vickers. Nurse — Miss Maurer. Health Officer — Geo. S. Eveleth, Acting. Sanitary Supervisor — Jas. S. Walton, M. D., Amsterdam. Hours — 3–4 P. M., daily.

MIDDLETOWN (Orange county). Established May 1, 1919.
Location — City Mission House, 66 East Main street. Physician — H. J. Shelley, M. D. Nurse — Miss Bessie At-

kins. Health Officer — J. L. Hanmer, M. D. Sanitary Supervisor — F. W. Laidlaw, M. D., Hurleyville. Hours — Tuesday, 8–9:30 P. M.; Friday, 8–9:30 P. M.

NIAGARA FALLS (Niagara county). Established January 27, 1919.
Location — 598 Pine avenue. Physician — R. S. Barry, M. D. Health Officer — W. S. Scott, M. D. Nurse — Miss M. C. Kelley. Sanitary Supervisor — Edward Clark, M. D., Buffalo. Hours — Monday (male) 7:30 to 9:30 P. M.; Thursday (male and female) 7:30 to 9:30 P. M.; Wednesday, 3:30 to 4:30 P. M.

NORTH TONAWANDA (Niagara county). Established November, 1919.
Location — 40 Webster street. Physicians — Dr. Charles Grance and Dr. T. P. C. Barnard. Nurse — Miss Elma Hagaman. Health Officer — T. P. C. Barnard, M. D. Sanitary Supervisor — Edward Clark, M. D. Hours — Tuesday, 8:30 P. M. (men); Friday, 8:30 P. M. (women).

OSWEGO (Oswego county). Established June 1, 1919.
Location — Oswego Hospital. Physician — A. C. Calisch, M. D. Health Officer — J. E. Mansfield, M. D. Sanitary Supervisor — C. R. Hervey, M. D., Oswego. Hours — Monday, Friday, 3–5 P. M.; Wednesday, 8–9 P. M.

PLATTSBURG (Clinton county). Established July, 1919.
Location — 46 Cornelia street (physician's office). Physician — Dr. L. F. Schiff. Sanitary Supervisor — William L. Munson, Granville, N. Y.

PORT CHESTER (Westchester county). Equipment ordered.
Location — 112 Purdy avenue. Physician — W. J. Sheehan, M. D. Health Officer — William J. Sheehan, M. D.

POUGHKEEPSIE (Dutchess county). Established April 21, 1919.
Location — 24 Washington street. Physician — Aaron B. Sobel, M. D. Nurse — Miss Augusta Freeman. Health Officer — Helen L. Palliser, M. D. Sanitary Supervisor — Perly H. Mason, M. D., Peekskill. Hours — Monday, 8–9 P. M.; Thursday, 8–9 P. M.

ROCHESTER (Monroe county). Established 1916. Five clinics.
Location — Rochester Health Bureau, 82 Chestnut street. Hours — Monday, 3–4 and 7–8 P. M.; Thursday, 3–4 P. M.
Location — Baden Street Dispensary, 160 Baden street. Phy-

sician — Dr. Homer W. Smith. Nurse — Miss Nancy Stahl. Hours — Monday, Tuesday and Friday, 7–9 P. M.; Tuesday and Friday, 8–10 A. M.

Location — General Hospital, 501 West Main street. Established July 19, 1917. Physician — W. F. Plumley, M. D. Nurse — Miss Alice Fulmer. Hours — Monday and Wednesday, 10–12 A. M.; Thursday, 7–9 P. M.

Location — Hahnemann Hospital, Rockingham streeet. Established September 16, 1919. Physician — Dr. E. Russell Sprague. Nurse — Miss Burns. Hours — Tuesday and Friday, 9–11 A. M.; Tuesday, 7:30–9 P. M.

Location — Homeopathic Hospital, 224 Alexander street. Hours — Saturday, 9 A. M.; Tuesday and Thursday, 7 P. M.

ROCKVILLE CENTER (Nassau county). Established July 19, 1919.

Location — 15 Clinton avenue. Physician — Dr. A. L. Higgins. Sanitary Supervisor — Frank Overton, Patchogue, N. Y.

ROME (Oneida county). Established December 26, 1918.

Location — 245 Dominick street. Physician — Dr. R. O. Morris. Nurse — Miss Ringrose. Health Officer — C. R. Mahady, M. D. Hours — Monday and Thursday, 8-10 P M.

SCHENECTADY (Schenectady county). Established January 1, 1919.

Location — 412 Liberty street (health center). Physician — W. H. Vanderwart, M. D. Nurses — Miss Mary Hemmerling, Miss Lydia Hauss. Health Officer — Dr. J. H. Collins. Sanitary Supervisor — C. C. Duryee, M. D., Schenectady. Hours — Tuesday and Thursday, 7:30 to 8:30 P. M.; Thursday, 11–12 A. M.

SYRACUSE (Onondaga county). Established April 1, 1919.

Location 610 East Fayette street. Physicians — C. H. Benson, Registrar; S. P. Richmond, H. A. MacGruer. Nurses — Miss St. John, Miss Cornell, social worker. Health Officer — Dr. Henry A. MacGruer. Sanitary Supervisor — F. W. Sears, M. D., Syracuse. Hours — Wednesday, 7:30 P. M.; Saturday, 9 A. M.; daily, 1:30 to 3:30 P. M.

TROY (Rensselaer county). Established October 1, 1919.

Location — Samaritan Hospital. Physician — H. W. Carey, M. D. Health Officer — M. D. Dickinson, M. D. Sanitary Supervisor — C. C. Duryee, M. D., Schenectady. Hours — Monday, 6–8 P. M.; Wednesday and Friday, 9–11 A. M.

UTICA (Oneida county). Established January 1, 1919.

Location — Utica Free Dispensary, 224 Mary street. Physicians — Dr. Angeline Martine, Dr. Fisher. Nurse — Miss Alma Hughes. Health Officer — Dr. Hugh Shaw. Hours — Monday, Tuesday, Thursday and Friday, 7–8 P. M.

WHITE PLAINS. (Westchester county). Equipment ordered December 18, 1919.

Location — 45 Hamilton avenue. Physician — Dr. E. G. Ramsdell.

YONKERS (Westchester county). Established February 27, 1919.

Location — Public Health Clinic, City Hall Building. Physician — B. H. Belcher, M. D. Nurse — Miss Louise Landers. Health Officer — C. W. Buckmaster, M. D. Sanitary Supervisor — P. H. Mason, M. D., Peekskill. Hours — Monday (women); Tuesday, Thursday and Friday (men).

Inspection

As stated above the clinics are all inspected at regular intervals by the consultant and inspector of clinics who observe carefully how the surgeon receives his patients, prepares his solutions and administers his drugs. They also supervise his method of keeping records. They are both expert syphlologists and frequently assist in administering treatments while visiting the clinics. The clinics are also visited by a supervising nurse who instructs the attending nurse how to prepare the injecting solution, also how to keep her records and make out her monthly reports. The supervising nurse visits each clinic every two months while the inspecting physician visits the clincs every three months.

Distribution of Arsphenamine

The State budget carried an item of $3,200 for the purchase of arsphenamine. This was greatly increased by the Federal fund which enabled the bureau to furnish arsphenamine to all of the clinics free of charge. For the present it was thought wise not to distribute the drug among the practitioners but to confine the free distribution to the dispensaries and state institutions until more of the physicians had an opportunity to perfect their technique. Inasmuch as most of the drug was purchased by Federal funds an effort was made to supply the free clinics of New York City as well as the clinics of the rest of the State. The amount distributed per month is shown in the following table.

GRAMS OF ARSPHENAMINE DISTRIBUTED

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Albany	11.6	22.6	2.4	8.8	22	10.8	15	28.8	36	88.8	30	36	312.8
Albion			120	25					35	45		35	260
Amsterdam			4.8		4.8	43.2			20	40		53	165.8
Auburn				60									60
Batavia						12							12
Bath									6				6
Bedford Hills									75				75
Binghamton						25	30	40	40	80	55	65	335
Buffalo			55	112	130	149.6	45	151	145	75	60	200	1,122.6
Comstock				26	26		24		36			35	147
Corning						6		11				10	27
Dunkirk						2.4	12		24				38.4
East View			2.4										2.4
Geneva			12										12
Glens Falls												16	16
Gloversville			20	14.4	14.4	9.6	13.2	24	36		36		167.6
Gouverneur		10				4							14
Hornell					36.4					27.6			64
Hudson						1.6					6	6	13.6
Ithaca	10		20	25	25	10	20	26			25		161
Jamestown				34				12					46
Johnson City			1.2										1.2
Kings Park	15												15
Kingston											12		12
Little Falls			2.4				3			12			17.4
Massena					4								4
Middletown					19.2		12	56				25	112.2
Mount Vernon							3	6				6	15
New York	12			515	19.2		280	250	250	232.2	179.8	24	1,762.2
Niagara Falls						31					24		55
N. Tonawanda												33	33
Ogdensburg				4.8									4.8
Olean						2.4					2.4	5	9.8
Oneonta					5					4.8			9.8
Ossining	1.8		6	4.2				90					102
Oswego							12				12		24
Plattsburg				6									6
Poughkeepsie		12			7.2	31.2			31.2			15.6	97.2
Rochester	106	100	145	110	260	179	380	140	305	400	255	205	2,585
Rockville Center								10.8		12			22.8
Rome	25	45	25	30	35	31		45	15	30	30	15	326
Schenectady	25			12			12	12	9.6	14.4	12	31.2	128.2
Syracuse		130	50	17.2	50	16.8	183		80	38.4		50	615.4
Troy	14.4	25		20	30	29	38.4	72.8	36	24			289.6
Utica		12	96	19.2	9.6	19.2	31	9.6	19.2	58.8	19.2	38.4	332.2
Watertown							3						3
Watervliet						3.6							3.6
Yonkers			25	26	25	31			10	35	50	50	252
Total per month	220.8	356.6	587.2	1,073.2	722.8	644.8	1,116.6	985	1,209	1,218	808.4	954.2	9,896.6

It is the intention of the Department to manufacture its own arsphenamine in the future and the Division of Laboratories and Research has been working upon this for the last year attempting to perfect a product that would meet the government test and be as satisfactory for use as other approved products. In the meantime we have been purchasing for distribution in the State the arsphenamine manufactured by the Dermatological Research Laboratory at Philadelphia.

The ratio of the total number of treatments given to the total number of patients attending the clinics has shown a very satisfactory increase, as will be shown by chart A.

It is quite possible that the average patient received, prior to our educational work, fewer treatments per month than 2.4. It is now our ambition to have this number increased, so that within the next year the average patient at the clinic will receive four or five treatments per month. This does not mean that patients actually receive only four or five treatments a month, because while a few patients are being added to the clinic each month other patients, having reached such a stage in their treatment where a rest is advisable, are temporarily discharged, while a number are being permanently discharged as cured. Another condition which must be mentioned and which we will perhaps be able to report as corrected by another year, is that at certain clinics the arsphenamine and mercury are given the patient at a single visit and considered but one treatment, while at other clinics the patient is given these two injections at different visits and recorded as two treatments.

Reporting Venereal Diseases

Syphilis, gonorrhea and chancroid have not been made reportable by the Public Health Council, but certain municipalities have placed them among the communicable diseases, to be reported in exactly the same manner as the others. Some other municipalities — Ithaca, Hornell, and Niagara Falls have made the disease reportable by substituting the physician's office number for the number of the patient.

The Sanitary Code contains the following regulation which enables us to secure a partial report of the new cases discovered by the physicians of the State.

> "Regulation 2-a. Submitting specimens for laboratory examination in cases of syphilis, gonorrhea and chancroid. It shall be the duty of every physician to submit promptly to the laboratory of the state department of health, or to a laboratory approved by the state commissioner of health for this purpose, such specimens for laboratory examination and such data relating thereto, as may be prescribed in the special rules and regulations issued by the state commissioner of health, from every person affected with any one of the communicable diseases mentioned in regulation 1, group B, or from any person in whom suspicion of such disease exists."

Diagnostical laboratories were requested by the Commissioner of Health to forward to the Bureau of Venereal Diseases duplicates of all positive examinations made and reported to physicians. These duplicates are filed and tabulated by the Department and studied for their statistical value. This form of reporting, while incomplete, has been growing more satisfactory, as it shows an increased number of positive examinations for each month, due perhaps to two influences; first, the general public is being educated by our lectures and pamphlets, and as a result persons are more anxious that a thorough examination including laboratory tests be made when they visit a physician; and, second, the physicians are more generally including the laboratory examinations as a part of their study of suspected venereal disease cases. There are in the State, in addition to the State Laboratory and its New York City branch, 25 public health laboratories where examinations for gonococci can be made and at ten of these blood specimens may be examined for the complement fixation test for syphilis. The State Laboratory is in a position to make tests free of charge for all physicians of the State while the other laboratories, being either county or municipal, make free examinations for physicians within their districts. In this way no physician need be deprived of laboratory facilities in making his diagnosis. This information has been widely circulated over the State by the education staff. During the year there were 9,070 positive examinations for syphilis reported from the laboratories and 2,447 positive examinations for gonorrhea. Approximately these were distributed through the months as shown by the attached charts, B and C.

In explanation of these charts it may be said that one reason that fewer cases were reported in January and February than in the succeeding months is that during these months the epidemic of influenza was raging in the State and physicians were so busy with their general practice that they neglected for the time to complete diagnosis of their syphilitic cases. A renewal of the epidemic of influenza has shown a slight effect again in November and December. It is interesting to note also that the number of positive examinations of gonococci greatly increased until the peak was reached in September, while the positive examinations for syphilis dropped off most markedly in July and reached the peak in August. The fact that August had five week endings may partly explain this unusual elevation on our chart during that month. If the matter of reporting, however, were the sole influence we should expect the same appearance on Chart C. It it possible, therefore, that some other influence may be found to account for this great difference in the number of positive syphilitic reports received in July, August and September.

By arbitrarily arranging the reports into age groups as indicated in Chart D it is shown that the greatest number of new cases of syphilis was found in the age period of 30 to 39 years while the greatest number of new cases of gonorrhea was discovered in the age period of 20 to 24 inclusive. The number of new cases of gonorrhea detected in the period of 30 to 39 is only 62 per cent of the number reported in the age group of 20 to 24. The number of new cases of syphilis reported in the two five-year periods — 20 to 24 and 24 to 29 — was approximately the same. In the latter of these two periods there is only 75 per cent as many news cases of gonorrhea reported as in the former.

In Chart E the reports are divided according to diseases and sex. As has generally been the case the majority of the reports are from males. In syphilis the number of reports from females is 58 per cent of the number received from males, while in gonorrhea it is but 29 per cent. This may be due, in part, to the fact that gonorrhea in females is much more readily overlooked than is syphilis.

Chart F. A study of the reports listed according to marital conditions discloses the fact that in syphilis the number of infections is almost equally divided among the married and single persons, the greater number being married, while in gonorrhea there are only half as many cases reported among married persons as among single.

Chart G shows the distribution of the cases in accordance with the location of the residence of the patient. Four times as many cases of syphilis and seven times as many cases of gonorrhea were reported from the cities as were reported from the rural districts. These reports do not include reports from New York City, and when we remember that the population of the State exclusive of New York City is about equally divided between urban and rural districts, we discover that the proportion of the reports received from the cities is much greater than those received from rural districts. This is due to several factors.

First.— The laboratories are more accessible to the city physician.

Second.— The physicians themselves are more accessible to the patients.

Third.— Our educational work has been more thorough in the cities than in the rural districts.

Fourth.— The foci of infection have been more numerous in the cities than they have been in the rural districts.

It would be interesting to know why the ratio between the town and city infection should be greater in gonorrhea than in syphilis.

Chart H.— In this chart an effort was made to distinguish between acute and chronic infections. As an arbitrary division we have considered all cases of syphilis as acute when the original examination is made within one year from the date of infection, while in gonorrhea those diseases were considered acute that were reported within six months of the time of the exposure. A glance at the chart will disclose that more than twice as many cases of syphilis were discovered after at least one year had elapsed since their exposure, while in the gonorrhea chart the number of acute cases was three times as many as the number of chronic cases. The facts that may have a bearing on this chart are:

First.— The ease with which acute cases of gonorrhea can be diagnosed.

Second.— The difficulty of diagnosing chronic cases of gonorrhea.

Third.— The greater influence exerted on the patient by the symptoms of acute gonorrhea as compared to those of syphilis.

Charts A and B.— In these charts an effort was made to divide the infected according to occupation and their value can not be appreciated until we learn what proportion of the population is engaged in these various occupations. This will be considered in making up our report next year but for the present it shows how our 9,000 reports have been grouped. The term "house-wife" is a general term and covers all married females who have no industrial occupation. The term "laborer" includes all men who are not skilled laborers. The term "inmates" is meant to include those committed to the reformatories. The term "clerks" comprises largely those persons who are employed in stores. The term "mill or shop" includes those persons who are employed in shops but not stating their specific occupation. The term "insane" comprises those reports received from the thirteen state hospitals. The other divisions are fully explained by their names.

It will be seen that in the syphilis chart the largest group is that of "house-wife" while in the gonorrhea chart the largest group is that of "laborer" — coinciding with the previous charts which have indicated repeatedly that proportionately more women have syphilis than gonorrhea.

(A division according to color is usually made but there are so few negroes in the State of New York that it is not considered advisable to prepare separate charts for them.)

The public clinics have been asked to submit copies of the treatment cards which they file, but only a few cards have thus far been received. A study of these, however, is very interesting. Some of the data they contain have been listed in the attached tables. There were 270 reports on all patients suffering from gonorrhea and 445 suffering from syphilis. Of the 445 suffering from syphilis 55 did not give their nationality and 247 or 62 per cent claimed to be Americans; 8.4 per cent claimed to be Italian and 5 per cent were negroes. In this State about 19 per cent of the population are Italians, while less than 2 per cent are negroes. Comparing this with the statistics received from the treatment cards for gonorrhea we find that of the 270 cards 241 stated their nationality. Of these 171 or 71 per cent were American and 12 per cent Italian, while 2 per cent were negroes. On these same cards were listed the sources of infection in a number of instances.

Out of the 251 syphilis cards on which the source was given 131 were charged to prostitutes and 56 to husbands, while in gonorrhea 94 out of 144 were charged to prostitutes and 17 to husbands.

This, of course, might be misleading in considering the per cent of prostitutes as the source of infection. These treatment cards are filled out for but a very small proportion of those persons who come into the clinics and are made out only on those patients whose history is most readily obtained, so they are not fairly representative of the type of patients who come to our clinics.

Syphilis

Nationality

American	247
Not stated	55
Italian	33
Negro	20
Polish	19
Irish	14
German	14
French	12
Russian	6
Hungarian	5
Austrian	4
Greek	3
Chinese	2
Welsh	2
English	1
Spanish	1
Roumanian	1
Swedish	1
Scotch	1
Hebrew	1
Armenian	1
Swiss	1
Bohemian	1
Total	445

Source of Infection

Not stated	194
Prostitute	131
Husband	56
Man not husband	31
Hereditary	30
Wife	2
Accidental	1
Total	445

Gonorrhea

Nationality

American	171
Italian	29
Not stated	29
Irish	15
Polish	6
Negro	5
Hebrew	5
German	4
French	3
English	3
Total	270

Source of Infection

Not stated	126
Prostitute	94
*Accidental	23
Husband	17
Man not husband	9
Wife	1
Total	270

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* Ophthalmia neonatorium cases are included among those classed as accidental.

Inspection of Institutions

Most of the state institutions, hospitals, prisons and reformatories were diagnosing and treating inmates infected with venereal diseases prior to the organization of this bureau, but one of our earliest activities was to get in touch with these institutions and offer them what assistance the Bureau could render in perfecting their work. In a number of instances parts of equipment were furnished. Our consultant was directed to visit them and assist in administering treatment on a few occasions and to all such institutions arsphenamine was offered from our supply. The assistance offered by us was accepted most enthusiastically by the authorities of each institution and at present it is becoming a part of the routine entrance examination for these several institutions to have a blood specimen taken of every new arrival.

An effort had been made during 1918 to secure a sanatorium where girls needing hospital treatment could be sent from sections in the State where such facilities were not available. It was hoped also that to this institution could be sent those girls who were arrested for the first time for vagrancy and who upon examination were found to need treatment for a venereal disease, and also those infected girls who could not be trusted with their liberty while undergoing treatment. For this purpose the State gave the Department the use of the State Farm for Women at Valatie. It was the intention to conduct this place as such a sanatorium and to incorporate as a part of the regime careful social and industrial training. An elaborate equipment was purchased and a physician was employed as surgeon. Unfortunately, there was no budget available for carrying out this scheme, and there were no laws under which persons could be committed to the institution. It was, therefore, necessary to abandon the scheme until adequate legislation could be secured.

The equipment was removed at the time of the Health Officers' Conference in June and set up as a part of the Health Center demonstration at Saratoga, after which use it was stored in a storage room of the Department awaiting a suitable opportunity for its permanent placement.

Repressional

As the number of patients coming to the clinics increased, two phases of the work appeared to demand more careful study. The first of these was the irregular attendance at the clinic of the patients under treatment. This is not a new observation; the venereal disease patient has always been a delinquent after the amelioration of the troublesome symptoms. It has been this indifference which has in the past brought to the afflicted such a lack of faith in the value of treatment which has helped to establish the conviction that syphilis and gonorrhea are incurable. The second phase of the work demanding immediate attention was the number of instances in which more than one member of the same family were found to be infected when they visited the clinic.

Plans had to be immediately devised for improving this part of the work if our clinics were to succeed and our work in the community attain its greatest usefulness. The problem seemed to be one of education. The laws under which the Bureau is operating are adequate for controlling cases while in the actively infective stage but they can not be extended to cover cases as long as they should be under treatment nor can they authorize investigation and examination of contact cases in the noninfective stage. The attitude and enthusiasm of the physician and nurse in the clinic will have a material influence on both of these problems but there is still lacking the education of the patient to the point where he will appreciate the necessity for persistent treatment and the education of those with whom he has associated regarding the importance of careful examination for the exclusion of infection after exposure. To find a person or organization that could thus supplement the physician and nurse was not a simple task but it was felt it could be done under the head of social work.

Two experienced social workers were taken onto the staff to develop this work in connection with a few of the clinics. They were instructed to direct the clinic nurse how to follow up tactfully and induce to return to the clinics those persons who discontinue their treatments before discharged by the physician. It was suggested that while calling on these patients they should learn as much of the family history as might have a bearing on the condition of the patient and also that part of the history which may have been influenced by the infection of the patient. If other members of the family were thought to be infected they should be induced to have themselves thoroughly examined either by the family physician or at the clinic.

The increased attendance at the clinic, due in part both to the more regular return of the patients under treatment and to the new patients admitted as a result of the investigation made by the social workers was so encouraging that an extension of the plan was considered. The principal objection originally presented to the plan was by this time shown to be negligible, *i. e.,* that the venereal disease social worker would be unwelcome in the home and her activities would work injury to the domestic relations of persons who might otherwise get on. It was demonstrated that this social worker was most welcome to many families and she became a traveling source of information that the whole community felt free to use. Instead of being unwelcome she became quite popular. And instead of wrecking families (no authentic information of any mischief done in this way has been received), she has definitely contributed to the happiness of many.

In June it was decided to organize a scheme of social work that would embrace the whole State. A director of social work was appointed to the staff and she was given five supervisors to assist her. The State was divided into five parts and a supervisor placed over each section. The program adopted was in brief:

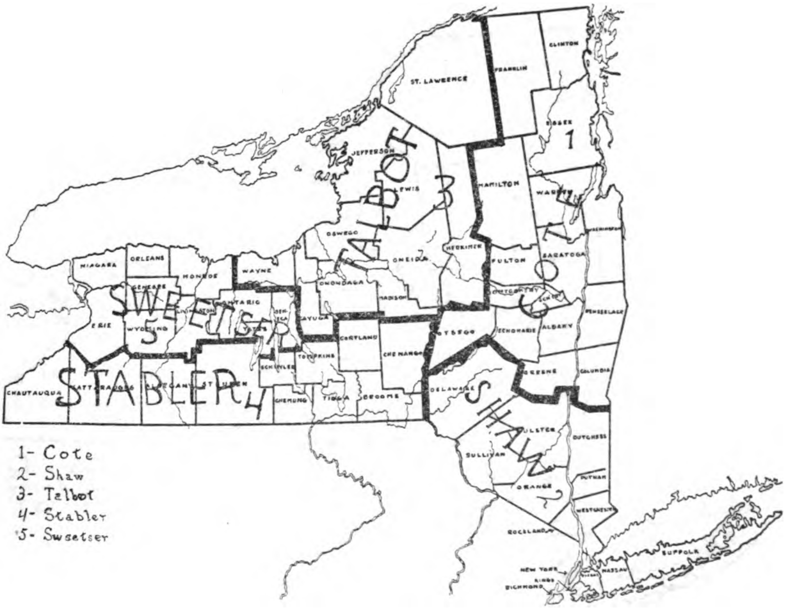
1 In connection with the clinic.
    (a) Follow-up work — Encourage delinquent patients to be regular in their attendance at the clinic.
    (b) Investigational — Recommend that other members of the families visited be examined.
    (c) Cooperative — Interest other health agencies in the activities of the clinic.
2 In the community.
    (a) Social surveys of cities where clinics are located.
    (b) Stimulation of repressive measures.
    (c) Stimulate organization of approved recreational facilities.

The follow-up and investigational work have been described above. For the clinic to attain its greatest usefulness it must be available to all health agencies of the community and the person best qualified to bring about this cooperation and mutual interest is the social worker. These three parts of the program are to be developed in detail by the nurse or social worker employed in the local clinic and supervised only by our sectional supervisor. The next three activities, however, must in a large measure be the work of the supervisor who will be assisted by the local nurse or social worker.

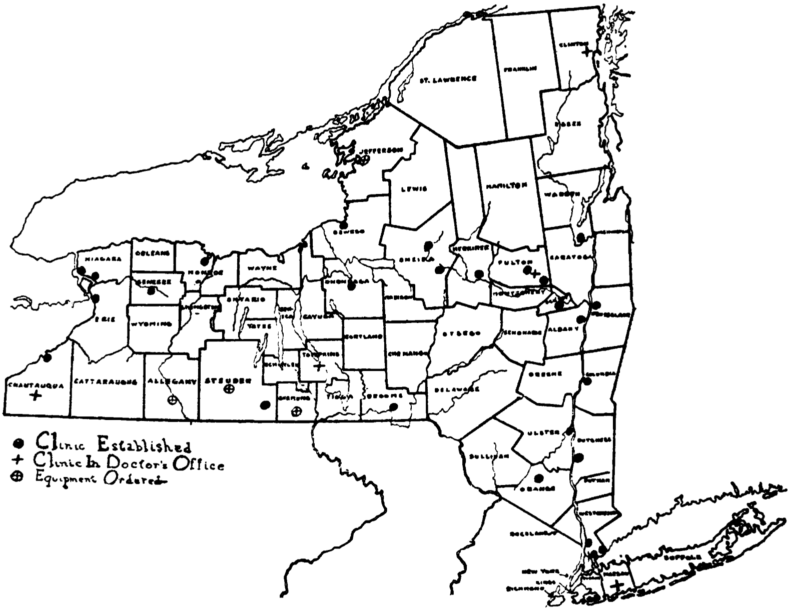
The survey made by the supervisor as her first activity in the city was intended to serve as a guide for further work in the community. The following outline was observed in surveying the city:

Survey of Community

1 Town or city.
  (a) Population — number and character.
  (b) Most important industries.
2 Institutions and organizations.
  (a) Detention homes.
  (b) Charity organizations.
  (c) Women's clubs.
  (d) Civic clubs.
  (e) Chambers of Commerce.
  (f) Court — probation department.
  (g) Industrial welfare.
3 Recreation.
  (a) Dance halls, moving picture theatres, amusement parks, etc.
  (b) Girls' clubs, boys' clubs, classes, settlements, etc.
4 Work of other social hygiene or venereal disease organizations.
  (a) Other hospitals and clinics treating venereal diseases.
  (b) Educational work.
  (c) United States Interdepartmental Social Hygiene Board representative.
5 Clinics (venereal diseases).
  (a) Number of cases — men and women.
  (b) Principal source of cases.
    1 Referred by individuals.
    2 Referred by social agencies.
    3 Referred by courts.



Social Service Districts



Distribution of Clinics

(c) Records.
(d) Publicity.
(e) Physical conditions.
(f) Personnel.

Surveys of the following cities have been completed:

Albany
Amsterdam
Binghamton
Buffalo
Glens Falls
Gloversville
Kingston
Little Falls
New Rochelle
Niagara Falls
North Tonawanda
Poughkeepsie
Rome
Schenectady
Syracuse
Troy
Utica
Yonkers

Most communities have adequate repressive laws but they either lack qualified personnel for their execution or attention has not been directed toward their importance. It is one of the duties of the social supervisor to stimulate the authorities having jurisdiction over these measures to see that they are enforced. The police, police matrons, judges and probation officers are all interviewed and their cooperation sought in securing for all possible suspects an examination and adequate treatment if necessary. Most enthusiastic cooperation has been the result in many cities.

The experience of the army authorities with supervised and well directed recreation as an antidote for lawlessness and a prophylactic for certain diseases is so striking that it has been felt that each community should initiate an active control over all of its recreational facilities whether public or commercial. Our supervisors are engaged in developing steering committees for such purposes. It is a far more difficult problem in the civil community than it was in the army but it is not impossible. It is too early to estimate any results from our activity in this line but we are quite hopeful.

The function of the social worker in venereal disease work is, therefore, two fold: to assist the clinic to increase its usefulness and to stimulate all individuals and agencies to correct conditions which promote the spread of these diseases. The latter is much the larger field and calls for exceptional ability and enthusiasm in the worker to stimulate and coordinate existing agencies for a comprehensive program. The elimination of venereal diseases from a district is not work for any single group or organization but a problem that demands the cooperation of every influence in the community. They have afflicted men so long that their presence is accepted by many as a necessary part of life and only the most painstaking and sympathetic efforts will avail in arousing the people to the truth of their condition and inspire them to join in perfecting measures of control. The field of the social worker lies here.

Total Clinic Activities

The total activities of clinics for the year 1919, can well be demonstrated in a chart similar to that for which the individual clinics have been drawn. This chart shows a definite increase in the number of treatments and also in the number of patients continuing treatment. The number of new cases that have applied to the clinics each month remains practically the same throughout the year. Two factors contribute to this increase; one, is that more clinics were opened as the year progressed and another, is the increased efficiency of each clinic. A seasonal variation is not noticeable in this first year but such change has been observed in laboratory reports of previous years.

Table showing frequency of submission of specimens and interval elapsing before submission of first specimen

Another study of the records of specimens sent in for examination reveals the fact that very few physicians are checking their work by use of the laboratory. Of 8,668 examinations made for syphilis more than 73 per cent were original examinations. Less than 16 per cent and 4 per cent were submitted for a second and third examination respectively. With cases of gonorrhea even less use was made of the laboratory; more than 88 per cent of the examinations were initial and in less than 8 per cent of the instances was a second specimen examined.

The time that elapsed from the date of infection and the submission of the first specimen is greater than was to be expected. Two factors would materially help produce this delay, either the initial symptoms were so mild the patient did not seek a physician or they were so marked that the physician did not think a laboratory confirmation necessary, and the instances where the patient sought his first treatment of a quack.

Of 4,408 specimens of syphilis where the time was recorded less than 35 per cent were submitted from cases within a year of the time of infection. More than one year had elapsed but not two in 13 per cent and 10 per cent more were reported between the second and third year. Fourteen per cent were reported between the 10th and 20th year after infection, and more than 6 per cent were not reported until twenty or more years after the exposure.

With gonorrhea much less time elapsed between the time of exposure and submission of specimen. About 89 per cent were from cases where infection occurred within the year while for an additional 4 per cent less than two years had elapsed since infection. Attached tables give information in detail.

SYPHILIS, 1919

MONTH	REPORTS OF ORIGINAL AND REEXAMINATION													
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th
January	494	67	30	17	5	1	....	....	2	....	....	1	....	....
February	492	70	20	4	4	....	....	....	....	....	....	....	....	....
March	458	86	30	20	6	7	....	....	3	....	....	....	....	....
April	575	102	34	12	2	....	1	....	1	1	1	1	....	....
May	561	115	25	9	6	2	....	....	1	....	....	....	....	....
June	500	115	37	15	6	....	1	....	....	1	....	....	....	....
July	647	142	46	7	6	....	1	1	....	1	1	....	....	....
August	565	132	40	15	10	5	2	....	1	1	1	....	....	....
September	502	152	58	27	6	4	1	1	....	....	1	....	1	....
October	594	133	50	33	16	4	2	1	1	1	....	2	....	....
November	440	166	56	33	8	3	2	1	1	2	1	....	....	....
December	575	105	38	28	31	5	10	3	3	1	....	....	....	1
Total	6,403	1,385	464	220	106	31	20	7	13	8	5	4	1	1

MONTH	YEARS ELAPSING BETWEEN INFECTION AND EXAMINATION												
	Less than year	1+	2+	3+	4+	5+	10+	15+	20+	30+	40+	Not stated	Total
January.........	110	71	38	36	12	39	31	17	21	4	4	234	617
February........	103	34	24	17	15	35	32	11	15	2	3	299	590
March..........	119	45	27	31	13	25	31	16	11	4	1	287	610
April...........	109	44	41	39	16	48	14	17	17	3	2	380	730
May............	97	39	40	35	14	40	39	23	17	4	1	370	719
June............	94	50	31	21	7	31	37	21	14	2	1	366	675
July............	147	71	39	23	21	42	31	20	20	4	2	432	852
August..........	155	40	41	26	10	37	23	20	13	3	1	403	772
September.......	153	48	54	23	21	53	48	21	25	4	6	297	753
October.........	144	43	44	16	10	43	25	22	24	4	2	460	837
November.......	155	61	36	20	16	44	47	21	18	1	3	291	713
December.......	130	34	33	25	18	42	36	19	17	4	1	441	800
Total.......	1,516	580	448	312	173	479	394	228	212	39	27	4,260	8,668

GONORRHEA, 1919

MONTH	REPORTS OF ORIGINAL AND REEXAMINATIONS											
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
January..............	106	6	1	1	....	....	....	....	....	....	....	....
February.............	117	3	....	2	....	....	....	....	....	....	....	....
March................	141	5	....	1	1	1	....	....	....	....	....	....
April................	128	9	2	....	1	....	....	....	....	....	....	....
May..................	173	12	3	1	1	....	....	....	....	....	....	....
June.................	175	10	4	....	....	....	....	....	....	....	....	....
July.................	207	25	4	5	2	1	2	....	....	....	....	....
August...............	212	13	3	2	....	....	....	....	....	....	....	....
September............	201	25	6	....	1	....	....	....	....	....	....	....
October..............	222	12	6	1	....	....	....	....	....	....	....	....
November.............	158	28	1	1	1	....	....	....	....	....	....	....
December.............	201	27	6	2	1	1	....	1	....	....	....	....
	2,041	175	36	16	8	3	2	1	....	....	....	....

MONTH	YEARS ELAPSING BETWEEN INFECTION AND EXAMINATION												
	Less than year	1+	2+	3+	4+	5+	10+	15+	20+	30+	40+	Not stated	Total
January.........	23	1	1	....	....	1	....	....	....	....	....	88	114
February........	33	1	....	....	....	1	....	....	....	....	....	86	122
March..........	38	2	2	3	....	....	....	....	....	....	....	104	149
April...........	65	4	2	1	....	2	2	....	....	....	....	64	140
May............	104	2	1	....	....	1	....	....	....	....	....	82	190
June............	109	6	3	1	....	3	....	....	....	....	....	67	189
July............	153	10	4	3	....	4	....	....	1	....	....	71	246
August..........	135	7	2	7	4	1	1	....	....	....	....	73	230
September.......	167	10	4	2	3	4	1	1	....	....	....	41	233
October.........	177	8	2	1	....	1	1	....	....	....	....	51	241
November.......	137	10	5	2	1	1	2	....	....	....	....	31	189
December.......	163	6	10	....	....	2	....	....	....	....	....	58	239
	1,304	67	36	20	8	21	8	1	1	....	....	816	2,282

ALBANY (Albany County)

ALBANY HOSPITAL

Venereal Disease Clinic. Established August 9, 1919. Dr. John E. Heslin. Hours — Monday, Wednesday and Saturday, 11 A. M.–1 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
June	5	....	20	....	....	....
July	2	5	7	....	....	....
August	1	4	5	....	....	....
September	1	16	17	10	4	7.6
October	3	4	26	12	....	7.2
November	3	6	28	6	6	6
December	....	8	26	....	....	....
Total	15	43	129	28	10	20.8

Cooperative visits: Mrs. Chichester, October 11, 1919. Dr. E. H. Marsh, October 30, 1919.

Educational work: (See South End Dispensary—Albany.)

ST. PETER'S HOSPITAL

Venereal Disease Clinic. Dr. James W. Wiltse. Hours — Monday, Wednesday and Saturday 11 A. M. Other times by appointments.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
August	5	....	20	4	2	3.2
September	4	4	3	6	....	3.6
October	4	2	10	12	....	7.2
November	....	....	....	12	....	7.2
Total	13	6	33	34	2	21.2

Cooperative visits: Mrs. Chichester, October 11, 1919. Dr. E. H. Marsh, October 30, 1919.

Educational work: (See South End Dispensary — Albany.)

SOUTH END DISPENSARY

Venereal Disease Clinic, Ash Grove and Trinity Places. Established January 1, 1919. Dr. P. W. Harrig. Hours — Tuesday 11–12 A. M., Wednesday 8:30 P. M., Saturday 3:30 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
March	....	....	....	4	....	2.4
April	....	....	....	6	10	7.6
May	7	....	33	12	....	7.2
June	2	5	31	16	3	10.8
July	6	9	59	....	....	....
August	2	17	51	12	....	7.2
September	9	16	69	24	....	14.4
October	11	15	150	40	8	27.2
November	9	37	149	30	12	22.8
December	6	38	130	....	....	....
Total	52	137	672	144	33	99.6

Cooperative visits: Mrs. Chichester, October 8 and 30, 1919. Dr. E. H. Marsh, October 30, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 7, 1919	Dr. Honsinger	"Fit to Fight"	....	1,500
Feb. 7, 1919	Dr. Lawrence	"Fit to Fight"	Conference of Rotary Clubs.	15 clubs represented
Feb. 24, 1919	Dr. Shaw	"Fit to Fight"	Men and high school boys	1,800
Feb. 25, 1919	Dr. Honsinger	"Fit to Fight"	Members of Legislature	250
Mar. 5, 1919	Dr. Brewer	"Fit to Fight"	West Albany Y. M. C. A.	283
Mar. 5, 1919	Dr. Helen Brown	"End of Road"	Albany Rotary Club	1,500
Mar. 6, 1919	Dr. Lawrence	"End of Road"	Albany Rotary Club	1,500
Mar. 7, 1919	Dr. Lawrence	"End of Road"	Albany Rotary Club	1,200
Mar. 7, 1919	Dr. Honsinger	"Fit to Fight"	Rotary Club	1,500
Mar. 25, 1919	Dr. Lawrence	"Fit to Fight"	Albany Mothers Club	60
April 19, 1919	Dr. Honsinger	"End of Road"	West Albany Y. M. C. A.	800

AMSTERDAM (Montgomery County)

Venereal Disease Clinic, 22 Market Street. Established June 1, 1919. Dr. Howard W. Murphy. Hours — Tuesday and Friday, 8 to 10; Saturday, 2 to 4 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
May	9		17		12	4.8
June	2	9	33	24	72	43.2
July	1	9	45			
August	6	5	39			
September	3	9	29		50	20
October	6	11	81		100	40
November	2	17	70			
December	13	12	115	50	50	50
Total	42	72	429	74	284	158

Cooperative visits: Mrs. Cote, June 19, 1919. Mrs. Chichester, July 10, 1919. Dr. S. P. Richmond, September, 1919. Mrs. Chichester, October 17, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 5, 1919	Dr. Ayer		Amsterdam Medical Society	38
	Dr. Lawrence			
	Dr. Walton			
Mar. 21, 1919	Dr. Jefferis	"End of Road"		1,200
Oct. 28, 1919	Dr. Croff			40
Oct. 29, 1919	Dr. Croff			15
Oct. 29, 1919	Dr. Croff			30
Oct. 29, 1919	Dr. Croff			350
Oct. 30, 1919	Dr. Croff	With slides		450
Oct. 30, 1919	Dr. Croff			300
Oct. 30, 1919	Dr. Guerard			30
Oct. 30, 1919	Dr. Guerard			50
Oct. 31, 1919	Dr. Guerard			300
Nov. 19, 1919	Dr. Lawrence	Diagrammatic film shown	Health Officers' Conference	

BATAVIA (Genesee County)

Venereal Disease Clinic, City Hall, Main Street. Established June 1, 1919. Dr. F. D. Carr. Hours — women, Tuesday and Thursday, 7 to 8 P. M.; men, Tuesday and Thursday, 8 to 9 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
June	3		5			
July	4	3	21			
August						
September			6			
October			5			
November			24			
Total	7	3	61			

Cooperative visits: Dr. E. H. Marsh, July 22, 1919. Mrs. Chichester, September, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 10, 1919	Dr. Edward Clark		Young ladies	60
Mar. 3, 1919	Dr. Edward Clark			220

BATH (Steuben County)

PLEASANT VALLEY SANATORIUM (Steuben County Tuberculosis Hospital)

Cooperative visits: Dr. E. H. Marsh, July 22, 1919. Mrs. Elliott I. Dorn.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
June	2		6			
July		2				
August		2	9			
September	1	1	6			
October	2		1			
November	2	1	3			
Total	7	6	25			

Educational Work

DATE	Lecturer	Film	Audience	Attendance
May 7, 1919	Mrs. M. M. Acker..	....	Mothers' Club	130
May 7, 1919	Mrs. M. M. Acker..	....	W. C. T. U.	150
May 13, 1919	Mrs. M. M. Acker..	....	....	48
May 12, 1919	Mrs. M. M. Acker..	....	Auspices Women's Missionary Society	60
Sept. 23, 1919	Dr. Guerard	....	County Fair	....
Oct. 17, 1919	Dr. Lawrence	....	Health Officers' Conference.	....

BINGHAMTON (Broome County)

Venereal Disease Clinic, 71–72 Collier Street. Established April 1, 1919. Dr. C. J. Longstreet. Hours — Monday and Friday, 3–6 P. M., Wednesday, 3–5 and 7–8 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
April	16	....	55	20	10	....	16
May	11	16	150	....	....	....	....
June	18	14	196	25	25	....	25
July	28	19	285	50	....	....	30
August	29	30	332	50	25	....	40
September ...	34	45	353	50	25	....	40
October	29	55	465	80	30	20	80
November ...	29	79	437	75	25	....	55
December	17	89	439	75	50	....	65
Total	211	347	2,712	425	190	20	351

Cooperative visits: Mrs. Shaw, May 13, 1919. Mrs. Shaw, June 2, 1919. Mrs. Chichester, September 24, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 21, 1919	Dr. Lawrence	"Fit to Fight"..	Associate of Magistrates....	30
Mar. 7, 1919	Dr. Honsinger	....	Rotary Club	250
Mar. 18, 1919	Dr. Ayer and Dr. Marsh	....	Medical Society	50
April 23, 1919	Dr. Ayer and Dr. Marsh	....	Medical Society	20
April 28, 1919	Dr. Guerard	....	....	60
April 29, 1919	Dr. Guerard	....	....	100
April 29, 1919	Dr. Guerard	....	Y. M. C. A.	200
April 29, 1919	Dr. Guerard	....	....	200
April 30, 1919	Dr. Guerard	....	Mothers' and Teachers'	70
Oct. 13, 1919	Dr. Croff	....	State Convention, W. C. T. U.	1,100

BUFFALO (Erie County)

MUNICIPAL HOSPITAL

Venereal Disease Clinic, 770 E. Ferry St. Dr. Walter S. Goodale. Hours — Monday, Wednesday and Saturday.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
April........	80	....	....	....	....	....	....
May........	38	44	505	....	....	....	....
June........	22	43	310	....	....	....	....
July........	21	38	285	....	....	....	....
August......	28	29	316	....	....	....	....
September...	17	29	320	....	....	....	....
October.....	29	16	183	....	....	....	....
November...	18	23	154	....	....	....	....
December....	20	26	274	....	....	....	....
Total....	273	248	2,347	....	....	....	....

Cooperative visits: Mrs. Shaw, April 23, 1919. Mrs. Chichester, May 26, 1919. Mrs. Chichester, September 20, 1919. Dr. Marsh, July 23, 1919.

Educational Work: (See Buffalo — Health Center No. 5.)

Venereal Disease Clinic, Health Center No. 5, 51 Court Street. Dr. A. J. Smith. Hours — Daily 3–5 and 7–8 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
April........	109	....	299	20	200	20	112
May........	76	135	361	65	70	63	123
June........	44	94	544	86	145	40	149.6
July........	44	113	435	45	45	20	65
August......	82	216	632	70	60	85	151
September...	77	189	621	85	85	60	145
October.....	93	155	813	50	50	25	75
November...	77	241	1,003	50	....	30	60
December....	86	309	1,248	100	100	100	200
Total....	688	1,452	5,956	571	755	443	1,080.6

Cooperative visits: Mrs. Shaw, April 23, 1919. Mrs. Chichester, May 26, 1919. Mrs. Chichester, September 20, 1919. Dr. Marsh, July 23, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 8, 1919	Dr. Brewer	…	…	150
…	Dr. Edward Clark	…	…	60
Mar. 11, 1919	Dr. Backus	"Fit to Fight"	…	350
April 28, 1919	Dr. Clark	"Fit to Fight"	…	300
April 29, 1919	Dr. Clark	"Fit to Fight"	…	1,200
April 30, 1919	Dr. Clark	"Fit to Fight"	…	3,500
May 1, 1919	Dr. Clark	"Fit to Fight"	…	4,000
May 2, 1919	Dr. Clark	"Fit to Fight"	…	700
May 3, 1919	Dr. Clark	"Fit to Fight"	…	1,200
May 3, 1919	Dr. Croff	…	Nurses' Training School, Lafayette General Hospital	10
May 19, 1919	Dr. Croff	…	…	150
June 30, 1919	Dr. Clark	…	Erie County Medical Society	…
July 11, 1919	Dr. Clark	…	…	1,500
July 14, 1919	Dr. Clark	…	…	1,500
July 18, 1919	Dr. Clark	…	…	2,000
Nov. 26, 1919	Dr. Croff	…	…	26
Nov. 25, 1919	Dr. Croff	…	…	26

CORNING (Steuben County)

Venereal Disease Clinic, City Hall. Dr. Frank S. Swain. Hours — Daily except Saturday and Sunday.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
July	9	…	60	6	6	…	6
August	4	4	28	15	5	…	11
September	3	8	52	…	…	…	…
October	3	3	16	…	…	…	…
November	3	5	24	…	…	…	…
December	1	…	4	10	10	…	10
Total	23	12	184	31	21	…	27

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 14, 1919	Dr. Brewer and Dr. Wakeman	…	Chamber of Commerce	…
Mar. 11, 1919	Dr. Lawrence	…	Health Officers' Conference	
Mar. 21, 1919	Mrs. Acker	…	…	57
Nov. 9, 1919	Dr. Edward Clark	…	…	250

DUNKIRK (Chautauqua County)

Veneral Disease Clinic, Public Health Center, 554 Deer Street. Established April 14, 1919. Dr. C. E. Hallenbeck. Hours — Tuesday and Friday 7–9 P. M.; Thursday 4–6 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
May........	5	....	20	....	....	....	....
June........	6	4	34	....	6	....	2.4
July........	1	10	35	12	12	....	12
August......	3	9	34	....	....	....	....
September...	7	2	36	12	12	12	24
October.....	3	9	43	6	18	....	10.8
November...	10	12	62	....	....	....	....
December....	....	7	51	....	....	....	....
Total....	35	53	315	30	48	12	49.2

Cooperative visits: Mrs. Chichester, September 21, 1919. Dr. Marsh, July 17, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Mar. 24, 1919	Dr. Croff..........	....	Girls' Club................	200
Mar. 25, 1919	Dr. Croff..........	....	....	250
Mar. 25, 1919	Dr. Edward Clark..	....	Locomotive Works........	600
Mar. 25, 1919	Dr. Croff..........	....	W. C. T. U...............	25
Mar. 26, 1919	Dr. Edward Clark..	....	Locomotive Works........	500
Mar. 27, 1919	Dr. Croff..........	....	....	400
Mar. 27, 1919	Dr. Croff..........	....	Church Association........	25
Mar. 28, 1919	Dr. Croff..........	....	Laundry Company.........	40
Mar. 28, 1919	Dr. Croff..........	....	Church Meeting..........	60
Mar. 28, 1919	Dr. Edward Clark..	....	Radiator Works...........	300
April 7, 1919	Dr. Edward Clark..	"Fit to Fight"..	....	1,400
April 7, 1919	Dr. Croff..........	"End of Road"..	....	900

GLENS FALLS (Warren County)

Venereal Disease Clinic, City Hall, Ridge Strret. Established October, 1919. Dr. M. Maslon. Hours — Tuesday and Friday 8–9 P. M.

	Patients		Treatments	Arsphenamine used			Total number of grams
	New	Old		0.6	0.4	1.0	
October.....	11	....	18	....	....	....	....
November...	3	5	25	....	....	....	....
December....	15	6	60	6	10	10	17.6
Total....	29	11	103	6	10	10	17.6

Cooperative visits: Dr. Marsh, September 22, 1919.

Educational Work

Date	Lecturer	Film	Audience	Attendance
Feb. 18, 1919	Dr. Honsinger.....	"Fit to Fight"..	....	1,500
Mar. 7, 1919	Dr. Brown.........	"End of Road"..	....	1,000
Mar. 27, 1919	Dr. Florence Meredith...........	....	Mothers' Club, Parent-Teachers' and Women's Clubs.................	....
Mar. 27, 1919	Dr. Florence Meredith...........	....	Hospital Guild, Registered Nurses Organization, Red Cross Nursing Classes and all nurses..............	....
Mar. 28, 1919	Dr. Florence Meredith...........	....	Wall Paper Co...........	331
Mar. 28, 1919	Dr. Florence Meredith...........	....	Shirt Co.................	627
Mar. 28, 1919	Dr. Florence Meredith...........	....	Textile Co...............	240
Mar. 29, 1919	Dr. Florence Meredith...........	"End of Road".	High School Girls..........	....

GLOVERSVILLE (Fulton County)

Venereal Disease Clinic, 21 West Fulton St. Established March, 1919. Dr. W. J. Kennedy. Hours — Tuesday and Friday 7–8 P. M.; Thursday 4–6 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
April	6	...	35	24	...	...	...
May	3	5	32	24	...	...	...
June	6	8	53	...	...	...	...
July	7	13	48	12	...	...	...
August	4	23	94	12	12	12	24
September	2	20	145	12	12	24	36
October	6	18	114	...	...	...	...
November	4	21	58	12	12	24	36
December	5	24	89	...	...	...	...
Total	43	132	668	96	36	60	96

Cooperative visits: Mrs. Cote, May 9, 1919. Dr. Marsh, July 10, 1919. Mrs. Chichester, July 17, 1919. Mrs. Chichester, October 14–16, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 13, 1919	Drs. Ayer, Lawrence and Walton		Medical Society	26
May 4, 1919	Dr. Esther Jefferis	"End of Road"	Women	1,200
Oct. 14, 1919	Dr. Honsinger		Chamber of Commerce luncheon	15
Oct. 14, 1919	Dr. Honsinger		Boys	290
Oct. 14, 1919	Dr. Honsinger		Men	150
Oct. 14, 1919	Dr. Croff		Women	30
Oct. 14, 1919	Dr. Croff		Women	130
Oct. 14, 1919	Dr. Croff		Women	50
Oct. 14, 1919	Dr. Croff			330
Oct. 14, 1919	Dr. Croff			60
Oct. 14, 1919	Dr. Croff			175
Oct. 14, 1919	Dr. Croff			25
Oct. 15, 1919	Dr. Croff			30
Oct. 15, 1919	Dr. Croff			50
Oct. 15, 1919	Dr. Croff			160
Oct. 15, 1919	Dr. Honsinger		Men	25
Oct. 15, 1919	Dr. Honsinger		Men	50
Oct. 15, 1919	Dr. Croff			50
Oct. 15, 1919	Dr. Croff			300
Oct. 15, 1919	Dr. Croff			1,500
Oct. 15, 1919	Dr. Honsinger		Men	75
Oct. 15, 1919	Dr. Croff		Women	100
Oct. 15, 1919	Dr. Croff		Women	75
Oct. 15, 1919	Dr. Croff		Women	30
Oct. 16, 1919	Dr. Honsinger		Father and son lecture	450
Oct. 16, 1919	Dr. Honsinger		Men	300
Oct. 16, 1919	Dr. Croff		Women	250
Oct. 16, 1919	Dr. Croff		Women	30
Oct. 16, 1919	Dr. Croff		Women	40
Oct. 16, 1919	Dr. Honsinger		Men	300
Oct. 16, 1919	Dr. Croff		Women	40
Oct. 16, 1919	Dr. Croff			35
Oct. 16, 1919	Dr. Croff			40
Oct. 16, 1919	Dr. Croff			28
Oct. 16, 1919	Dr. Croff			175
Oct. 16, 1919	Dr. Croff			450
Oct. 17, 1919	Dr. Croff			35
Oct. 17, 1919	Dr. Croff			135
Oct. 17, 1919	Dr. Croff		Women	30
Oct. 17, 1919	Dr. Croff		Ministers	125

HUDSON (Columbia County)

Venereal Disease Clinic, 232 Warren Street. Established November 12, 1919. Dr. W. D. Collins. Hours — Wednesday 8–9 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
November	2	....	5	6	6	6
December	....	....	....	6	6	6
Total	2	....	5	12	12	12

ITHACA (Tompkins County)

Venereal Disease Clinic, 125 Farm street. Dr. M. A. Dumond. Clinic conducted in physician's office.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
April	20	....	....	....	....	....
May	19	9	129	25	25	25
June	11	19	47	....	25	10
July	16	22	145	20	20	20
August	7	17	64	....	....	....
September	11	....	....	10	50	26
October	9	....	122	....	....	....
November	7	22	....	25	25	25
December	7	....	....	....	....	....
Total	107	89	507	80	145	106

Cooperative visits: Mrs. Shaw, May 28, 1919, to June 22, 1919, inclusive.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 12, 1919	Dr. Brewer........	....	Rural Welfare Conference..............	....
July 24, 1919	Dr. Croff..........	Lantern slides.....	....	203
July 25, 1919	Dr. Edw. Clark....	Lantern slides.....	....	60
Oct. 3, 1919	Dr. Lawrence......	....	Health Officers' Conference..............	....

JAMESTOWN (Chautauqua County)

Venereal Disease Clinic, 507 Washington Street. Established February, 1919. Dr. C. F. Ormes. Hours — Tuesday and Friday 1–4 P. M. and Tuesday 7–8 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
March	4	....	5	....	....	....
April	7	4	21	34	34	34
May	11	3	33	....	....	....
June	3	4	9	....	....	....
July	3	7	23	....	....	....
August	7	....	16	12	12	12
September	5	2	14	....	....	....
October	5	1	5	....	....	....
November	1	8	9	....	....	....
December	8	....	8	....	....	....
Total	54	29	143	46	46	46

Cooperative visits: Dr. Marsh, July 25, 1919. Mrs. Chichester, September 23, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
April 1, 1919	Dr. Edw. Clark			130
April 2, 1919	Dr. Edw. Clark			125
April 2, 1919	Dr. Carro Croff		Y. W. C. A	25
April 2, 1919	Dr. Carro Croff			200
April 2, 1919	Dr. Carro Croff		Church meeting	250
April 3, 1919	Dr. Carro Croff			100
April 3, 1919	Dr. Edw. Clark			250
April 3, 1919	Dr. Edw. Clark			350
April 3, 1919	Dr. Croff	"End of Road"		1,000
April 3, 1919	Dr. Croff		Church society	25
April 3, 1919	Dr. Croff		Graduate nurses	25
April 4, 1919	Dr. Edw. Clark			150
April 4, 1919	Dr. Edw. Clark	"Fit to Fight"		1,200
April 4, 1919	Dr. Croff			75
April 4, 1919	Dr. Croff		Business college	160
April 7, 1919	Dr. Croff		Church meeting	150
April 8, 1919	Dr. Croff		Parent-teachers	50
April 8, 1919	Dr. Croff			30
April 8, 1919	Dr. Edw. Clark			250
April 8, 1919	Dr. Edw. Clark			50
April 8, 1919	Dr. Croff		Teachers and parents	25
April 8, 1919	Dr. Croff			30
April 9, 1919	Dr. Croff			30
April 9, 1919	Dr. Edw. Clark			160
April 9, 1919	Dr. Croff		Laundry	25
April 10, 1919	Dr. Croff		Laundry	20
April 10, 1919	Dr. Edw. Clark		K. of C. lodge	75
April 10, 1919	Dr. Croff		Church society	350
April 10, 1919	Dr. Croff			20
April 11, 1919	Dr. Croff		High school	100
April 11, 1919	Dr. Edw. Clark			150
Sept. 25, 1919	Dr. Lawrence		Health Officers' Conference	....

JOHNSTOWN (Fulton County)

Veneral Disease Clinic, 10 So. William St. Dr. Austin Hogan. Hours — Tuesday and Thursday 1–2 and 7–8 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
March	1	....	....	....	....	....
April	1	1	13	....	....	....
May	1	....	8	....	....	....
June	2	1	24	....	....	....
July	....	2	18	....	....	....
August	1	1	24	....	....	....
September	....	2	....	....	....	....
October	....	2	10	....	....	....
November	....	3	6	....	....	....
December	....	....	24	....	....	....
Total	6	12	127	....	....	....

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Sept. 24, 1919	Dr. Honsinger	....	....	150

KINGSTON (Ulster County)

Veneral Disease Clinic, 74 John St. Established June 15, 1919. Dr. Frank A. Johnston. Hours — Monday and Friday 7–9 P. M.

	PATIENTS		Treatments	ARSPHENAMIN USED		Total number of grams
	New	Old		0.6	0.4	
August	....	....	....	....	....	....
September	....	....	....	....	....	....
October	....	....	....	....	....	....
November	1	....	2	....	....	....
December	1	1	5	....	....	....
Total	2	1	7	....	....	....

Cooperative visits: Mrs. Chichester, July 25, 1919. Mrs. Chichester, October 1, 1919. Dr. Marsh, October 11, 1919.

Educational Work

Date	Lecturer	Film	Audience	Attendance
Oct. 6, 1919	Dr. M. G. Gray....	....	....	350
Oct. 6, 1919	Dr. M. G. Gray....	....	....	98
Oct. 6, 1919	Dr. M. G. Gray....	....	....	80
Oct. 6, 1919	Dr. M. G. Gray....	....	....	135
Oct. 7, 1919	Dr. M. G. Gray....	....	....	70
Oct. 7, 1919	Dr. M. G. Gray....	....	....	20
Oct. 7, 1919	Dr. M. G. Gray....	....	....	100
Oct. 8, 1919	Dr. M. G. Gray....	....	....	35
Oct. 8, 1919	Dr. M. G. Gray....	....	....	25
Oct. 8, 1919	Dr. M. G. Gray....	....	....	125
Oct. 8, 1919	Dr. M. G. Gray....	....	....	135
Oct. 8, 1919	Dr. M. G. Gray....	....	....	45
Oct. 9, 1919	Dr. M. G. Gray....	....	....	40
Oct. 9, 1919	Dr. M. G. Gray....	....	....	50
Oct. 9, 1919	Dr. M. G. Gray....	....	....	500

LITTLE FALLS (Herkimer County)

Venereal Disease Clinic, 539 Albany Street. Established July, 1919. Dr. H. W. Vickers. Hours — 3–4 P. M. daily.

	Patients		Treatments	Arsphenamine used		Total number of grams
	New	Old		0.6	0.4	
March..................	....	....	....	....	6	2.4
July....................	4	....	....	....	....	....
August..................	1	4	8	....	....	....
September...............	1	5	3	....	....	....
October.................	3	6	9	12	12	12
November................	1	6	10	....	....	....
December................	2	7	13	....	....	....
Total..............	12	28	43	12	18	14.4

Cooperative visits: Mrs. Cote, June 14, 1919. Mrs. Chichester, July 16, 1919. Mrs. Chichester, October 29, 1919. Miss Talbot, October 6, 1919. Mrs. Mitchell, October 9, 1919.

MIDDLETOWN (Orange County)

Venereal Disease Clinic, City Mission House, 66 E. Main Street. Established May 1, 1919. Dr. H. J. Shelley. Hours — Tuesday 8–9:30 P. M.; Friday 8–9:30 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
May	5	....	2	....	....	....	....
June	2	2	11	....	....	....	....
July	6	4	27	12	12	....	12
August	9	9	56	12	72	20	56
September	6	12	56	....	....	....	....
October	6	17	106	....	....	....	....
November	....	11	42	....	....	....	....
December	5	20	61	....	....	25	25
Total	39	75	361	24	84	45	93

Cooperative visits: Mrs. Cote, May 24, 1919. Mrs. Shaw, July 17, 1919. Dr. Marsh, July 18, 1919. Mrs. Chichester, July 25–26, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 4, 1919	Dr. Brewer	....	....	....
Mar. 4, 1919	Dr. Brewer	"Fit to Fight"	....	1,400
Mar. 3, 1919	Dr. Brewer	....	....	10
Mar. 3, 1919	Dr. Brewer	....	....	25
Mar. 3, 1919	Dr. Brewer	....	Rotary Club	25
Mar. 4, 1919	Dr. Brewer	....	....	200
Oct. 21, 1919	Dr. Lawrence	....	Health Officers' Conference	....

NIAGARA FALLS (Niagara County)

Venereal Disease Clinic, 598 Pine Ave. Established January 27, 1919. Dr. R. S. Barry. Hours — Monday (male) 7:30 to 9:30 P. M.; Thursday (male and female) 7:30 to 9:30 P. M.; Wednesday 3:30 to 4:30 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
January	4	....	....	....	....	....
February	8	1	....	....	....	....
March	28	3	....	....	....	....
April	11	2	19	....	....	....
May	29	10	61	....	....	....
June	15	23	60	....	....	....
July	20	86	135	29	34	31
August	30	27	114	....	....	....
September	28	35	146	....	....	....
October	10	35	108	24	24	24
November	9	21	87	....	....	....
December	15	16	107	....	....	....
Total	207	259	837	53	58	55

Cooperative visits: Mrs. Shaw, April 4–12, 1919. Mrs. Shaw, July 1–12, 1919. Mrs. Chichester, May 27, 1919. Mrs. Chichester, September 18, 1919. Dr. Marsh, July 24, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Mar. 10, 1919	Dr. Scott			60
Mar. 10, 1919	Dr. Honsinger	"Fit to Win"		500
Mar. 11, 1919	Dr. Edw. Clark			125
Mar. 11, 1919	Dr. Edw. Clark	"Fit to Win"		500
Mar. 12, 1919	Dr. Edw. Clark			300
Mar. 12, 1919	Dr. Edw. Clark	"Fit to Win"		1,600
Mar. 12, 1919	Dr. Edw. Clark			100
Mar. 13, 1919	Dr. Honsinger			100
Mar. 13, 1919	Dr. Honsinger			100
Mar. 13, 1919	Dr. Lawrence	"Fit to Win"		1,800
Mar. 14, 1919	Dr. Edw. Clark			125
Mar. 14, 1919	Dr. Edw. Clark			100
Mar. 14, 1919	Dr. Croff	"End of Road"	Y. W. C. A.	700
Mar. 15, 1919	Dr. Edw. Clark		Y. M. C. A.	600
Mar. 15, 1919	Dr. Croff		Y. W. C. A.	700
Mar. 16, 1919	Miss Casey	"End of Road"		700

NORTH TONAWANDA (Niagara County)

Venereal Disease Clinic, 40 Webster Street. Established November, 1919. Dr. Charles Grance and Dr. T. P. Barnard. Hours — Tuesday (men) — 8:30 P. M., Friday (women) — 8:30 P. M.

	Patients		Treatments	Arsphenamine used			Total number of grams
	New	Old		0.6	0.4	1.0	
December....	2	....	4	25	25	8	33

Educational Work

Date	Lecturer	Film	Audience	Attendance
Feb. 11, 1919	Dr. Edw. Clark....	....	Rotary Club..............	....
Feb. 11, 1919	Dr. Edw. Clark....	....	Chamber of Commerce.....	....
Feb. 11, 1919	Dr. Edw. Clark....	....	....	36
May 23, 1919	Dr. Edw. Clark....	....	....	300
May 26, 1919	Dr. Edw. Clark....	....	....	200
May 26, 1919	Dr. Croff..........	....	....	175
May 27, 1919	Dr. Edw. Clark....	....	....	300
May 27, 1919	Dr. Croff..........	....	Teachers..................	60
May 28, 1919	Dr. Edw. Clark....	....	....	250
May 28, 1919	Dr. Croff..........	....	....	30
May 28, 1919	Dr. Croff..........	....	....	175
May 29, 1919	Dr. Edw. Clark....	....	....	250
May 29, 1919	Dr. Edw. Clark....	....	Rotary Club..............	100
May 31, 1919	Dr. Edw. Clark....	....	....	1,200
June 1, 1919	Dr. Croff..........	....	Y. W. C. A...............	50

OSWEGO (Oswego County)

Veneral Disease Clinic, Oswego Hospital, West 6th & Bridge Streets. Established June 1, 1919. Dr. A. C. Galish. Hours — Monday & Friday 3–5 P. M., Wednesday, 8–9 P. M.

	Patients		Treatments	Arsphenamine used		Total number of grams
	New	Old		0.6	0.4	
June..................	....	....	....	....	....	....
July..................	1	....	1	12	12	12
August..............	9	1	32	....	....	....
September.........	1	7	26	....	....	....
October.............	3	6	26	....	....	....
November..........	3	12	39	12	12	12
December...........	5	9	52	....	....	....
Total............	22	35	176	24	24	24

Cooperative visits: Dr. Marsh, July 16, 1919. Mrs. Chichester, September, 1919. Dr. Richmond, November 6, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 22, 1919	Dr. Nathelie Mankell...	....	Women's clubs........	....
Mar. 16, 1919	Dr. Honsinger.........	"Fit to Fight"..	....	1,800

PLATTSBURG (Clinton County)

Venereal Disease Clinic. Established July, 1919. Dr. L. F. Schiff. Clinic conducted in physician's office.

	PATIENTS		Treatments	ARSPHENAMINE USED		Total number of grams
	New	Old		0.6	0.4	
April..................	1	....	3	....	....	....
October................	....	1	2	....	....	....
Total.............	1	1	5	....	....	....

Cooperative visits: Mrs. Cote, July 26, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Mar. 18, 1919	Dr. Honsinger.....	"Fit to Fight"..	....	500
Nov. —, 1919	Dr. Marsh.........	....	Health Officers' Conference.	....

POUGHKEEPSIE (Dutchess County)

Venereal Disease Clinic, 24 Washington St. Established April 21, 1919. Dr. Aaron B. Sobel. Hours — Monday, 8–9 P. M.; Thursday, 8–9 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
February....	....	....	....	12	12	....	12
April........	3	....	3	....	....	....	....
May........	14	1	56	12	....	....	7.2
June........	6	14	78	36	24	....	31.2
July........	3	21	77	....	....	....	....
August......	11	22	102	....	....	....	....
September...	15	27	93	36	24	....	31.2
October.....	4	32	118	....	....	....	....
November...	4	32	96	....	....	....	....
December....	6	17	104	12	6	6	15.6
Total....	66	166	727	108	66	6	97.2

Cooperative visits: Mrs. Cote, May 17, 1919. Mrs. Chichester, June 9–12, 1919. Mrs. Chichester, October 2, 1919. Dr. Marsh, July 14, 1919. Dr. Marsh, October 10, 1919. Mrs. Mitchell, September, 1919. Mrs. Shaw, September 17, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 23, 1919	Dr. Brewer		First Baptist Church	150
Feb. 23, 1919	Dr. Brewer	"Fit to Fight"		
Feb. 24, 1919	Dr. Brewer		Maline Plough Works	200
Feb. 24, 1919	Dr. Brewer			50
May 6, 1919	Dr. Helen Brown		Church society	75
May 8, 1919	Dr. Helen Brown		Parent-Teachers' Ass'n	40
May 9, 1919	Dr. Helen Brown			250
May 9, 1919	Dr. Helen Brown		Parent-Teachers' Ass'n	20
May 11, 1919	Dr. Helen Brown	"End of Road"		950
May 12, 1919	Dr. Helen Brown		High school boys	50
May 12, 1919	Dr. Helen Brown		High school boys	50
May 12, 1919	Dr. Helen Brown			30
May 13, 1919	Dr. Helen Brown		High school boys	40
May 13, 1919	Dr. Helen Brown		High school boys	40
May 14, 1919	Dr. Helen Brown		Y. W. C. A.	100
May 14, 1919	Dr. Helen Brown		Parent-Teachers	40
May 14, 1919	Dr. Helen Brown			30
May 15, 1919	Dr. Helen Brown			40
May 15, 1919	Dr. Helen Brown			50
May 15, 1919	Dr. Helen Brown		Parent-Teachers	20
May 15, 1919	Dr. Helen Brown			950
May 12, 1919	Dr. Helen Brown		High school boys	50
May 12, 1919	Dr. Helen Brown		High school boys	50
May 12, 1919	Dr. Helen Brown			30
May 13, 1919	Dr. Helen Brown		High school boys	40
May 13, 1919	Dr. Helen Brown			40
May 14, 1919	Dr. Helen Brown		Y. W. C. A.	100
May 14, 1919	Dr. Helen Brown		Parent-Teachers	40
May 14, 1919	Dr. Helen Brown			30
May 15, 1919	Dr. Helen Brown			40
May 15, 1919	Dr. Helen Brown			50
May 15, 1919	Dr. Helen Brown		Parent-Teachers	20
May 15, 1919	Dr. Helen Brown		Parent-Teachers	15
May 16, 1919	Dr. Helen Brown			100
May 21, 1919	Dr. Helen Brown		High school boys	50
May 21, 1919	Dr. Helen Brown		High school boys	50
May 22, 1919	Dr. Helen Brown		High school boys	60
May 22, 1919	Dr. Helen Brown		High school boys	60
June 7, 1919	Dr. Helen Brown		Parent-Teachers	20
June 7, 1919	Dr. Helen Brown		Y. W. C. A.	75
June 7, 1919	Dr. Helen Brown			11
Nov. 5, 1919	Dr. Helen Brown			20
Nov. 5, 1919	Dr. Croff	Illustrated with slides		150
Nov. 5, 1919	Dr. Croff		Factory	85
Nov. 5, 1919	Dr. Croff			65
Nov. 6, 1919	Dr. A. R. Guerard			30
Nov. 6, 1919	Dr. A. R. Guerard			30
Nov. 6, 1919	Dr. A. R. Guerard		Eastman college	400
Nov. 6, 1919	Dr. Croff			20
Nov. 6, 1919	Dr. Croff		Nurses (Health Ass'n)	20
Nov. 6, 1919	Dr. Croff		Eastman college	250
Nov. 7, 1919	Dr. Croff		Parent-Teachers	10
Nov. 7, 1919	Dr. Croff		Factory	165
Nov. 7, 1919	Dr. A. R. Guerard			150

ROCHESTER (Monroe County)

HEALTH BUREAU

Veneral Disease Clinic, 82 Chestnut St. Established 1916. Dr. G. W. Goler. Hours — Monday 3–4 and 7–8 P. M.; Thursday 3–4 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
January	227	....	....	100	100	....	100
February	40	227	....	100	100	....	100
March	16	313	....	100	100	....	100
April	274	81	925	50	50	....	50
May	21	28	233	....	....	200	200
June	22	51	8	30	30	30	60
July	35	....	....	....	....	100	100
August	29	....	....	....	....	....	....
September	41	....	....	....	....	200	200
October	....	....	....	100	50	100	180
November	26	....	....	50	50	75	125
Total	731	700	1,166	530	480	705	1,215

Cooperative visits: Mrs. Chichester, May 22–24, 1919. Mrs. Chichester, September 13, 1919. Mrs. Shaw, May 5–12, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
September 1 to Sept. 6 1919	Dr. Croff	....	County Fair	....
Sept. 26, 1919	Dr. Lawrence	....	Health Officers' Conference.	....
Oct. 18, 1919	Dr. Lawrence and Dr. Goler	....	Nurses	18
Nov. 13, 1919	Dr. Guerard	....	American Ass'n of Wholesale Opticians	70

BADEN STREET DISPENSARY

Venereal Disease Clinic, 160 Baden St. Established 1919. Dr. Homer W. Smith. Hours — Monday, Tuesday and Friday, 7–9 P. M.; Tuesday and Friday, 8–10 A. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
March	....	....	....	65	15	....	46
April	....	....	....	100	....	....	60
May	106	....	....	100	....	....	60
June	44	99	616	165	....	20	99
July	55	153	995	50	....	250	280
August	32	176	842	75	50	75	140
September	26	186	917	50	....	75	105
October	26	113	732	75	....	175	220
November	23	239	740	50	....	100	130
December	16	27	731	100	50	125	205
Total	328	993	5,578	830	115	820	1,345

Cooperative visits: Mrs. Chichester, May 22–24, 1919. Mrs. Chichester, September 13, 1919. Mrs. Shaw, May 5–12, 1919.

Educational Work (See Health Bureau)

GENERAL HOSPITAL

Venereal Disease Clinic, 501 West Main St. Established July 19, 1917. Hours — Monday and Wednesday 10–12 A. M.; Thursday 7–9 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
May	59	....	135	....	....	....	....
June	25	....	169	....	....	....	....
July	15	98	223	....	....	....	....
August	10	85	227	....	....	....	....
September	24	68	260	....	....	....	....
October	14	119	300	....	....	....	....
November	9	115	278	....	....	....	....
December	12	5	301	....	....	....	....
Total	168	490	1,893	....	....	....	....

Cooperative visits: Mrs. Chichester, May 22–24, 1919. Mrs. Chichester, September 13, 1919. Mrs. Shaw, May 5–12, 1919.

Educational Work (See Health Bureau)

HAHNEMANN HOSPITAL

Venereal Disease Clinic, Rockingham St. Established September 16, 1919. Hours — Tuesday and Friday 9–11 A. M.; Tuesday 7:30 to 9 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
September...	10	....	12	....	....	....	....
October.....	13	9	65	....	....	....	....
November...	19	6	73	....	....	....	....
December....	....	25	87	....	....	....	....
Total......	42	40	237	....	....	....	....

Cooperative visits: Mrs. Chichester, May 22–24, 1919. Mrs. Chichester, September 13, 1919. Mrs. Shaw, May 5–12, 1919.

Educational Work

(See Health Bureau)

ROCKVILLE CENTER (Nassau County)

Venereal Disease Clinic, 15 Clinton Ave. Established July 19, 1919. Dr. A. L. Higgins.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
July........	1	....	....	....	....	....	....
August......	8	1	17	6	18	....	....
September...	....	9	12	....	....	....	....
October.....	1	9	10	12	12	....	....
November...	....	....	....	....	....	....	....
December....	1	....	2	....	....	....	....
Total......	11	19	41	18	30	....	....

ROME (Oneida County)

Venereal Disease Clinic, 245 Dominick St. Established December 26, 1918. Hours — Monday and Thursday 8–10 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
January.....	10	....	....	25	25	....	25
February....	8	17	....	50	....	....	30
March......	2	24	....	....	....	....	....
April........	5	29	62	50	....	....	30
May........	10	28	98	20	20	....	20
June........	5	34	61	45	10	....	31
July........	2	22	56	....	....	....	....
August......	10	25	64	50	....	....	30
September...	11	35	133	....	....	....	....
October.....	10	33	105	50	....	....	30
November...	7	25	93	50	....	....	30
December....	10	30	102	25	....	....	15
Total....	90	302	774	365	55	....	241

Cooperative visits: Mrs. Chichester, May 12, 1919. Mrs. Chichester, July 28, 1919. Mrs. Cote, June 12, 1919. Dr. Marsh, July 21, 1919. Miss Talbot, September, 1919. Dr. Richmond, October 21, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Sept. 30, 1919	Dr. Croff..........	....	Registered nurses..........	12
Sept. 30, 1919	Dr. Croff..........	....	....	50
Oct. 1, 1919	Dr. Croff..........	....	....	35
Oct. 1, 1919	Dr. Croff..........	....	....	55
Oct. 2, 1919	Dr. Honsinger.....	....	....	150
Oct. 2, 1919	Dr. Honsinger.....	....	....	300
Oct. 2, 1919	Dr. Honsinger.....	....	....	100
Oct. 2, 1919	Dr. Honsinger.....	Illustrated lecture.........		200
Oct. 2, 1919	Dr. Honsinger.....	....	....	150
Oct. 3, 1919	Dr. Honsinger.....	....	....	200
Oct. 3, 1919	Dr. Honsinger.....	....	....	300
Oct. 3, 1919	Dr. Croff..........	....	....	40
Oct. 3, 1919	Dr. Croff..........	Slides..........	....	225
Oct. 3, 1919	Dr. Croff..........	....	....	65
Oct. 7, 1919	Dr. Honsinger.....	....	Medical society...........	23
Oct. 10, 1919	Dr. Croff..........	....	....	85
Nov. 20, 1919	Dr. Lawrence ...... Diagrammatic film	....	Health Officers' Conference.	....

SCHENECTADY (Schenectady County)

HEALTH CENTER

Venereal Disease Clinic, 412 Liberty St. Established January 1, 1919. Dr. W. H. Vanderwart. Hours — Tuesday and Thursday 7:30 to 8:30 P. M.; Thursday 11–12 A. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
January.....	25	....	....	25	25	....	25
February....	22	25	....	....	....	....	....
March......	47	46	....	....	....	....	....
April.......	20	38	101	12	12	....	12
May........	15	48	153	....	....	....	....
June........	13	56	129	37	37	....	37
July........	14	47	46	12	12	....	12
August......	14	58	131	12	12	....	12
September...	13	44	126	....	24	....	9.6
October.....	11	61	184	....	36	....	14.4
November...	10	46	132	12	12	....	12
December....	14	53	150	36	24	....	31.2
Total....	218	522	1,152	146	194	....	165.2

Cooperative visits: Mrs. F. Cote, March 8, 1919. Mrs. F. Cote, April 4–12, 1919. Mrs. Chichester, May 1–3, 1919. Mrs. Chichester, July 7–11, 1919. Dr. Marsh, July 10, 1919. Mrs. Chichester, September 5, 1919. Mrs. F. Cote, September 1–22, 1919. Mrs. E. Mitchell, September, 1919. Dr. Richmond, September, 1919. Dr. Marsh, October 31, 1919. Mrs. Chichester, October 10, 1919. Mrs. Chichester, October 28, 1919. Mrs. Chichester, October 31, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 11, 1919	Drs. Ayer, Lawrence and Duryee......	....	Medical Society............	....
April 15, 1919	Dr. Honsinger......	....	Woodmen of America......	....

SYRACUSE (Onondaga County)

Venereal Disease Clinic, 610 East Lafayette St. (Night Clinic established April 1, 1919.) Drs. C. H. Benson, Registrar; S. P. Richmond, H. A. MacGruer

	Patients		Treatments	Arsphenamine used			Total number of grams
	New	Old		0.6	0.4	1.0	
February....	94	....	....	25	25	....	25
March.......	54	81	....	50	50	....	50
April........	61	81	428	....	....	....	....
May........	63	98	474	50	....	20	50
June........	91	102	518	....	....	....	....
July.........	56	119	481	47	2	25	54
August......	78	136	551	....	....	....	....
September...	53	152	555	50	....	50	100
October.....	62	140	622	....	....	....	....
November...	39	160	582	....	....	....	....
December....	51	63	593	50	50	....	50
Total....	702	1,132	4,804	272	127	95	329

Cooperative visits: Mrs. Mary Shaw, April 12, 1919. Mrs. Chichester, May 20–21, 1919. Dr. Marsh, July 15, 1919. Mrs. Chichester, September 3, 1919.

Educational Work

Date	Lecturer	Film	Audience	Attendance
Mar. 2-5, 1919	Dr. Honsinger......	"Fit to Fight"..	....	4,000
Sep. 8-13, 1919	Dr. Croff..........	....	State Fair................	....
Sep8-9,13,1919	Dr. Croff..........	....	County Fair..............	....
Sept. 30, 1919	....	....	Health Officers' Conference.	....
Oct. 24, 1919	Dr. Lawrence......	....	Health Officers' Class......	....

TROY (Rennselaer County)

SAMARITAN HOSPITAL

Venereal Disease Clinic, Burdette Ave. Established October 1, 1919. Dr. H. W. Carey. Hours — Monday 6–8 P. M.; Wednesday and Friday 9–11 A. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
January.....	19	....	....	24	....	....	14.4
February....	12	19	....	25	25	....	25
March......	18	17	....	....	....	....	....
April........	18	19	107	....	50	....	20
May........	17	23	125	10	35	10	30
June........	6	24	121	....	35	....	14
July........	20	23	142	....	40	10	26
August......	19	39	182	....	82	40	72.8
September...	7	36	182	....	40	20	36
October.....	8	50	117	....	....	....	....
November...	6	44	146	24	24	....	24
December....	7	48	134	....	....	....	....
Total....	157	342	1,256	83	331	80	262.2

Cooperative visits: Mrs. Mary Shaw, April 12, 1919. Mrs. Chichester, June 30 to July 3, 1919. Dr. Marsh, July 11, 1919. Mrs. F. Cote, July 7–12, 1919. Dr. Marsh, October 30, 1919. Mrs. Chichester, October 9, 1919. Mrs. Chichester, October 15, 1919. Mrs. Chichester, October 27, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 17, 1919	Dr. Lawrence......	....	Parent-Teachers...........	....
Feb. 27, 1919	Miss Casey.........	"End of Road"..	....	....
Feb. 28, 1919	Dr. Lawrence......	"End of Road"..	....	....
Feb. 28, 1919	Dr. Shaw..........	"End of Road"..	....	....
Mar. 1, 1919	Miss Casey.........	"End of Road"..	Auspices Civic League.....	....
Mar. 10, 1919	Dr. Helen Brown...	....	....	90
Mar. 11, 1919	Dr. Helen Brown...	....	....	120
Mar. 12, 1919	Dr. Helen Brown...	....	....	60
Mar. 13, 1919	Dr. Helen Brown...	....	....	290

UTICA (Oneida County)

UTICA FREE DISPENSARY

Venereal Disease Clinic, 224 Mary St. Established January 1, 1919. Dr. Angeline Martine and Dr. Fischer. Hours — Monday, Tuesday, Thursday and Friday 7–8 P. M.

	PATIENTS		Treatments	ARSPHENAMINE USED			Total number of grams
	New	Old		0.6	0.4	1.0	
January	2	....	2	....	....	....	....
February	15	2	41	12	12	....	12
March	19	12	67	24	....	....	14.4
April	7	20	103	30	12	....	22.8
May	12	24	131	24	....	....	14.4
June	16	29	191	48	....	....	28.8
July	20	45	250	15	....	3	12
August	16	53	257	24	....	....	14.4
September	25	75	350	48	....	....	28.8
October	21	95	422	84	....	12	62.4
November	17	101	361	48	....	....	28.8
December	11	110	361	60	24	....	45.6
Total	181	566	2,536	417	48	15	284.4

Cooperative visits: Mrs. F. Cote, March 15–29, 1919. Mrs. Chichester, May 13–17, 1919. Mrs. Cote, June 30, July 2, 1919. Dr. Marsh, July 15, 1919. Mrs. Chichester, July 29, August 1, 1919. Dr. Richmond, September, 1919. Dr. Richmond, October 13, 21, 1919.

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 2, 1919	Dr. Honsinger	"Fit to Fight"	....	3,000
Mar. 17, 1919	Mrs. Cote	....	Parent-Teachers Association	....
Mar. 18, 1919	Dr. Jefferis	"End of Road"	....	15
Mar. 20, 1919	Dr. Jefferis	"End of Road"	....	300
April 1, 1919	Dr. Jefferis	....	Department Store	80
April 1, 1919	Dr. Jefferis	....	Parent-Teachers	20
April 3, 1919	Dr. Jefferis	....	Department Store	75
April 4, 1919	Dr. Jefferis	....	Department Store	65

Venereal Disease Clinic, Rooms 34–36 Gardner Bldg., 194 Genesee St. Dr. C. N. Hichman and Dr. R. C. Borst.

	Patients		Treatments	Arsphenamine used			Total number of grams
	New	Old		0.6	0.4	1.0	
July........	18	....	82	5	25	5	18
August......	17	15	137	....	....	....	....
September...	9	19	116	....	....	....	....
October.....	....	....	....	12	12	6	18
Total....	44	34	335	17	37	11	36

Cooperative visits: Mrs. F. Cote, March 15–29, 1919. Mrs. Chichester, May 13–17, 1919. Mrs. Cote, June 30, July 2, 1919. D. Marsh, July 15, 1919. Mrs. Chichester, July 29 to Aug. 1, 1919. Dr. Richmond, September, 1919. Dr. Richmond, October 13–21, 1919.

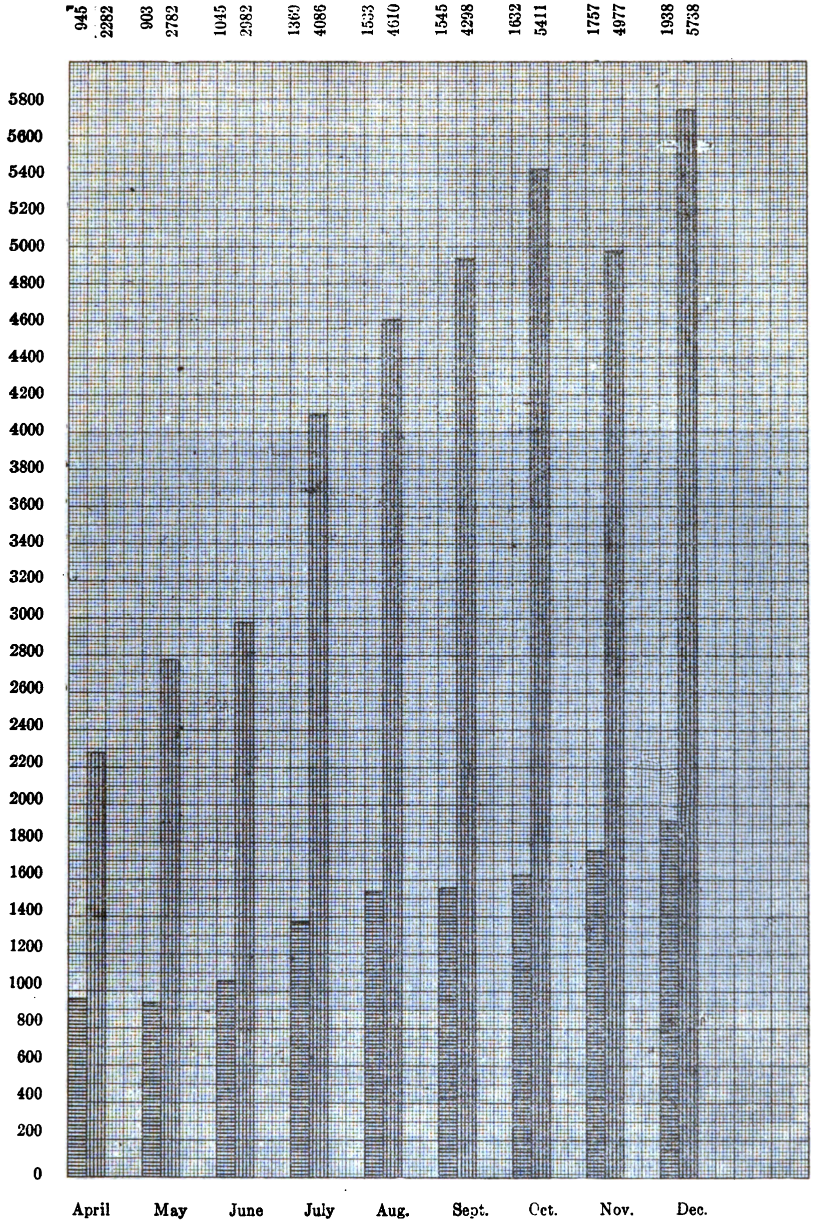
Educational Work (See Utica Free Dispensary)

YONKERS (Westchester County)

Venereal Disease Clinic, City Hall Building. Established February 27, 1919. Dr. B. H. Belcher. Hours — Monday (women), Tuesday, Thursday and Friday (men).

	Patients		Treatments	Arsphenamine used			Total number of grams
	New	Old		0.6	0.4	1.0	
March......	9	....	29	25	25	....	25
April........	23	9	111	....	35	....	14
May........	24	25	161	25	25	....	25
June........	17	49	171	....	....	....	....
July........	16	63	159	25	25	....	25
August......	14	76	171	....	....	....	....
September...	29	87	314	....	....	10	10
October.....	11	105	344	25	25	10	35
November...	14	100	256	25	25	25	50
December....	7	[illegible]2	276	25	25	25	50
Total....	164	516	1,992	150	185	70	234

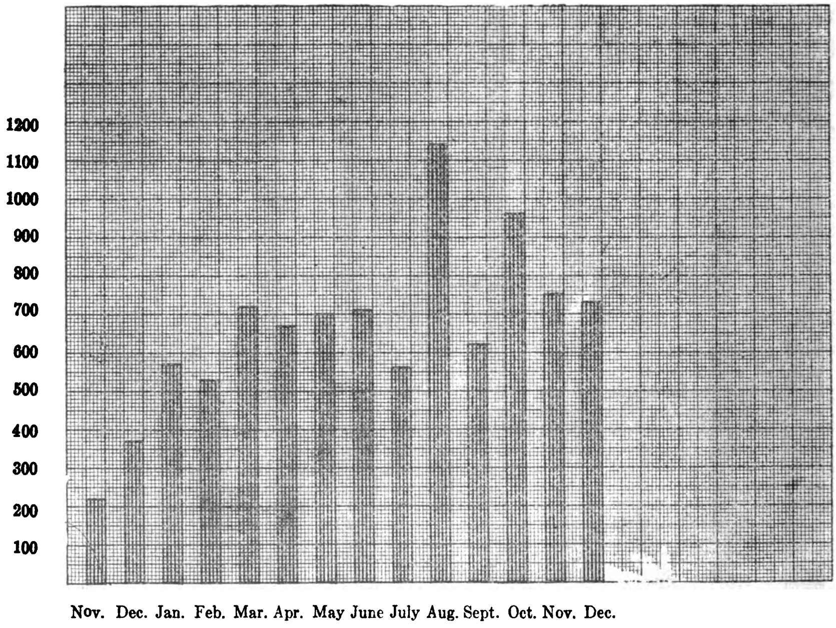
Cooperative visits: Mrs. Chichester, July 13, 1919. Mrs. Shaw, August 20, 1919. Mrs. Shaw, September 5–15, 1919. Mrs. Mitchell, September, 1919. Dr. Marsh, October 7, 1919. Mrs. Chichester, October 3, 1919.



▤ Number of Patients treated.— Both Syphilis and Gonorrhea are included in this chart.

▥ Number of treatments given.— During the month of November there were fewer treatment days than in the preceding months, owing to the intervention of holidays. This accounts for the fact that the number of patients showed the usual increase while the number of treatments showed a decided decrease.

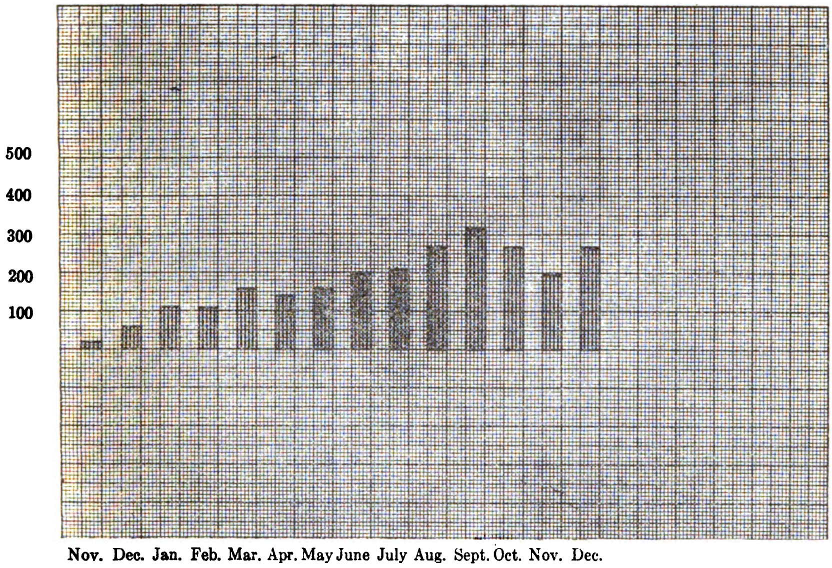
CHART A



Monthly report of positive examinations made for Syphilis by Public Health Laboratories from November, 1918, to December, 1919, inclusive.

These reports were totaled at the end of each week. January and March had five week endings which accounts, in part, for the increased number of examinations reported in those months.

CHART B



Monthly report of positive examinations made for Gonorrhea by Public Health Laboratories from November, 1918, to December, 1919, inclusive.

These reports were totaled at the end of each week. January and March had five week endings which accounts, in part, for the increased number of examinations reported in those months.

CHART C

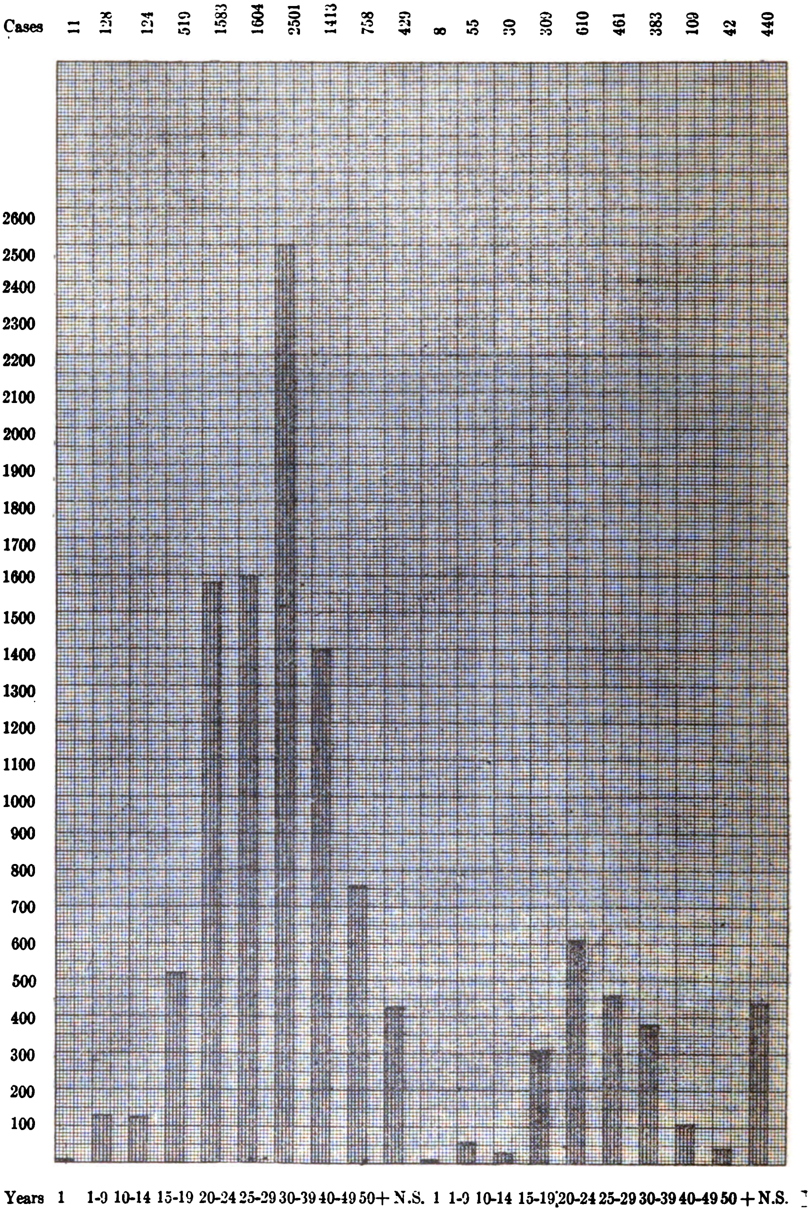


CHART D

DISTRIBUTION ACCORDING TO AGE OF PATIENT

Syphilis Gonorrhea

N. S. = Age not stated

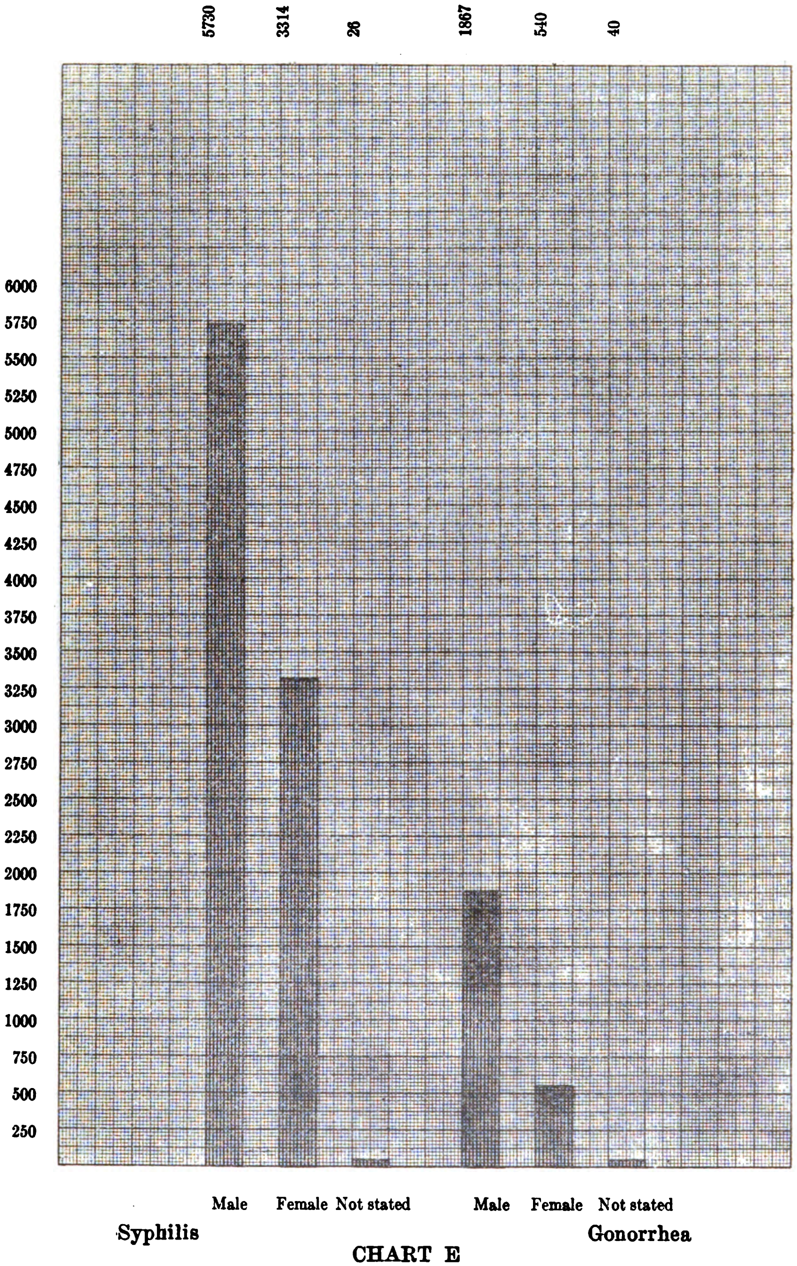


CHART E

DISTRIBUTION ACCORDING TO SEX

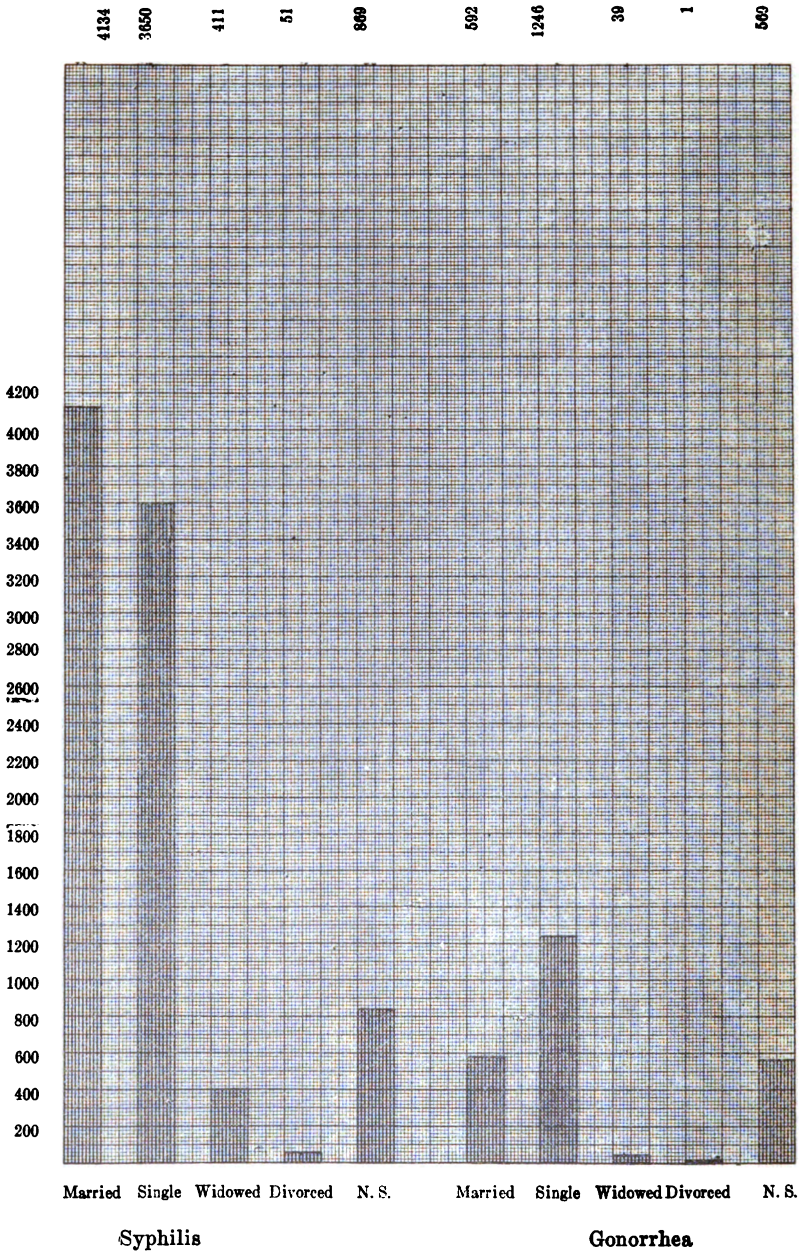


CHART F

Distribution According to Marital Condition

N. S. = Age not stated

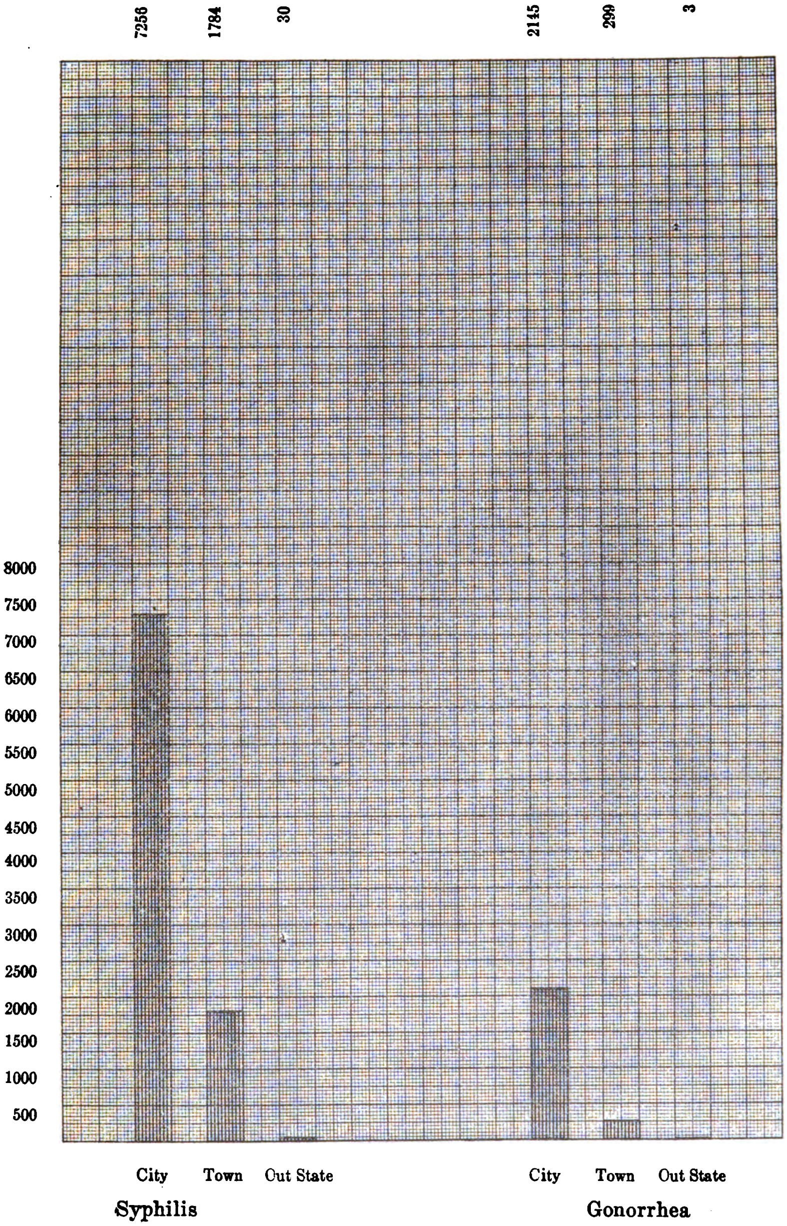


CHART G

Distribution According to Locality of Residence of Patient

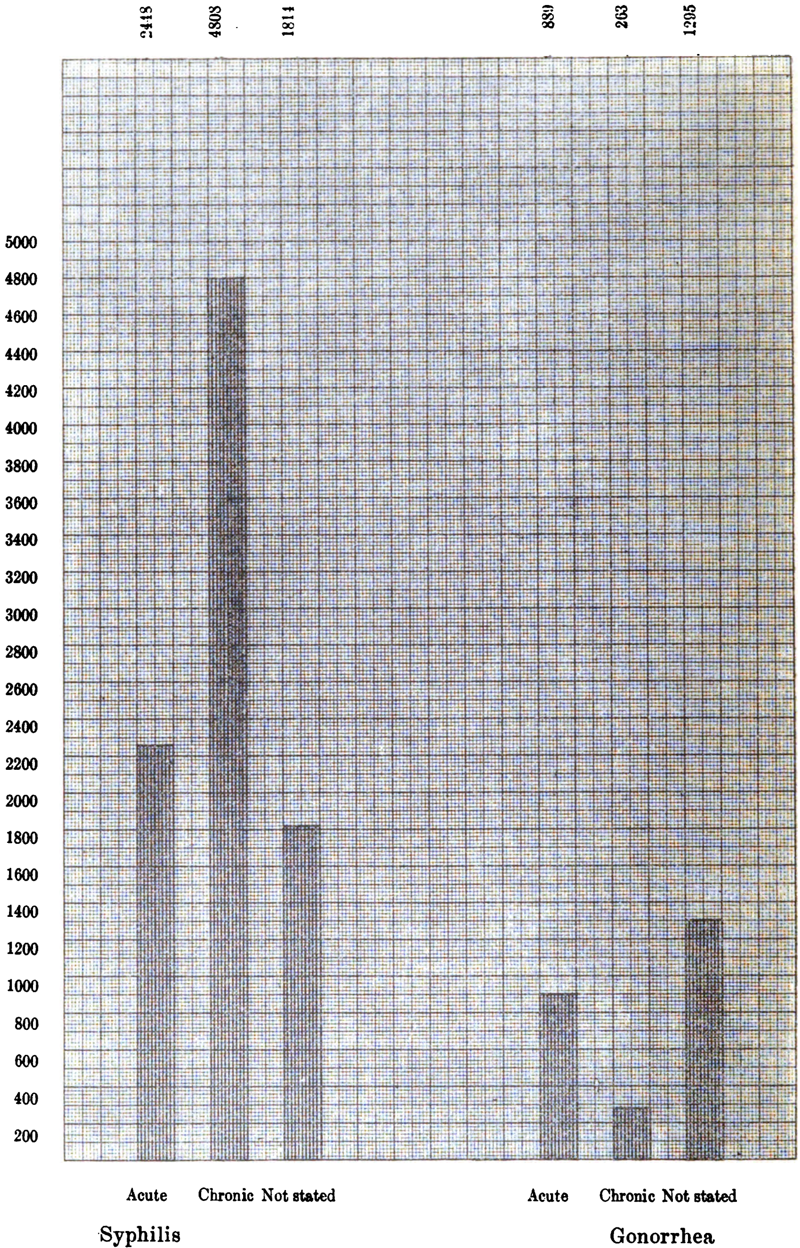


CHART H

Distribution According to Stage of Disease

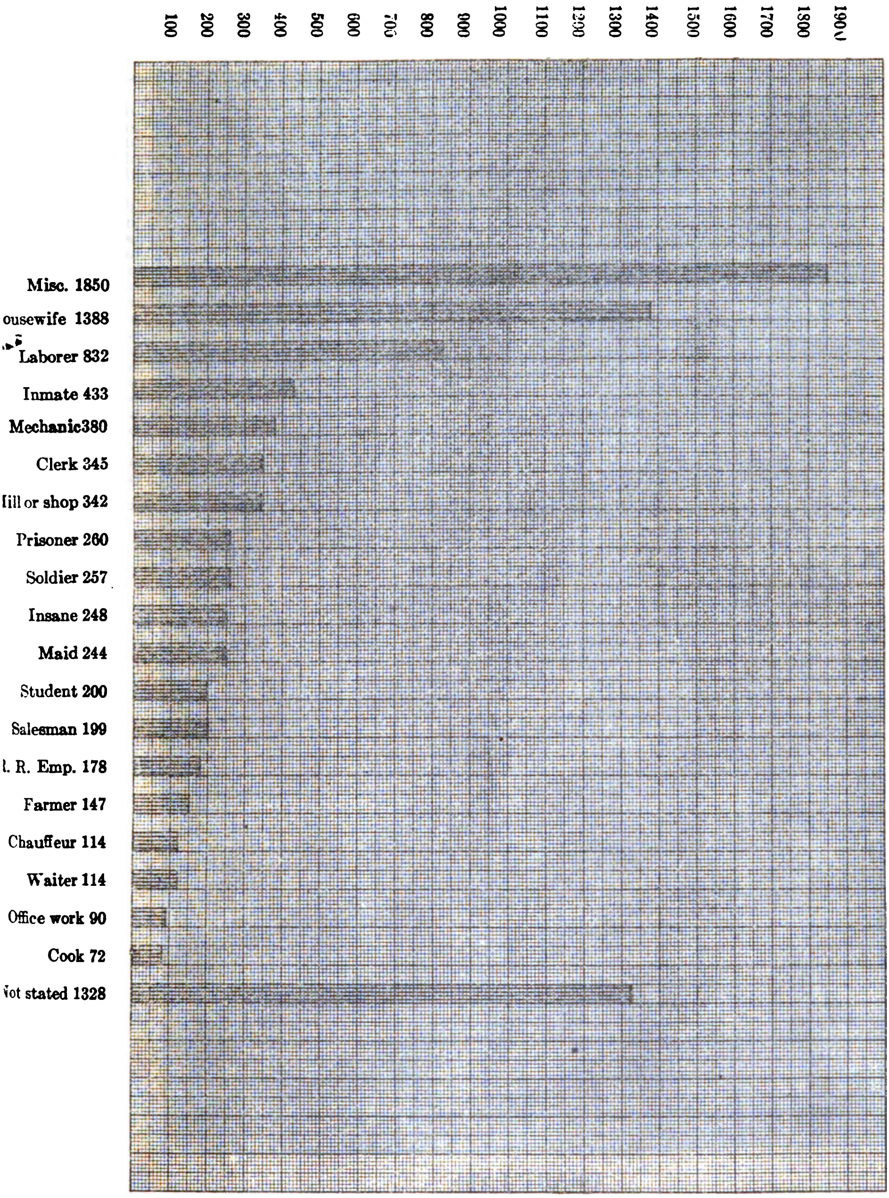


CHART I (a)

DISTRIBUTION ACCORDING TO OCCUPATIONS

Syphilis

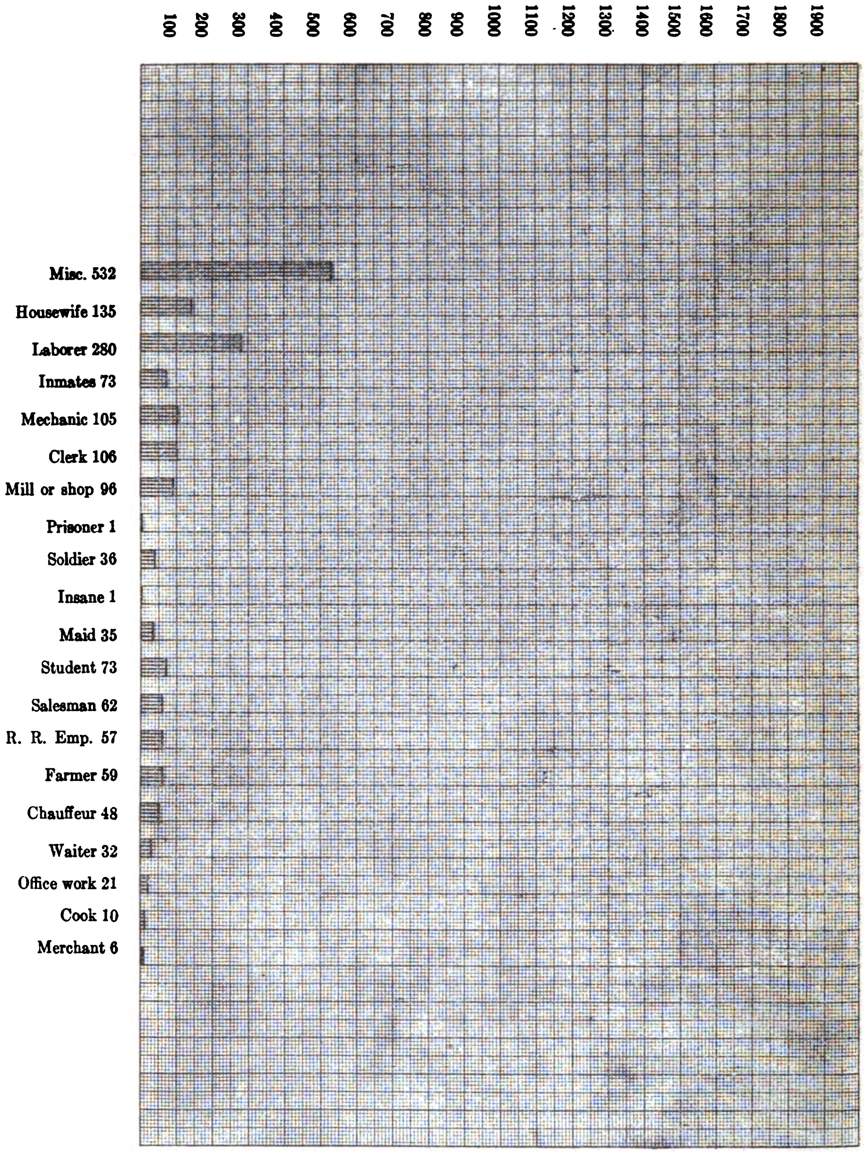


CHART I (b)

DISTRIBUTION ACCORDING TO OCCUPATIONS

Gonorrhea

Educational Work

DATE	Lecturer	Film	Audience	Attendance
Feb. 11, 1919	Dr. Guerard	"Fit to Fight"		
Feb. 11, 1919	Dr. Guerard		Armory	
Feb. 12, 1919	Dr. Guerard			
Feb. 15, 1919	Dr. Guerard			
Feb. 27, 1919	Drs. Ayer, Lawrence and Mason		Medical Society	30
Feb. 27, 1919	Dr. Guerard			
Feb. 28, 1919	Dr. Guerard			
Mar. 21, 1919	Dr. Helen Brown			25
Mar. 22, 1919	Dr. Helen Brown			30
Mar. 23, 1919	Dr. Helen Brown		Woman's Club	30
Mar. 24, 1919	Dr. Helen Brown		Mother's Club	25
Mar. 25, 1919	Dr. Helen Brown			30
Mar. 26, 1919	Dr. Helen Brown		Parent-Teachers Association	25
Mar. 27, 1919	Dr. Helen Brown		Y. W. C. A.	35
Mar. 28, 1919	Dr. Helen Brown		Church Society	25
Mar. 29, 1919	Dr. Helen Brown			100
Mar. 29, 1919	Dr. Helen Brown		Mothers' Club	25
Mar. 29, 1919	Dr. Helen Brown		Y. W. C. A.	15
Mar. 30, 1919	Dr. Helen Brown		Parent-Teachers Association	20
May 1, 1919	Dr. Helen Brown			250
May 1, 1919	Dr. Helen Brown		Jewish Girls Club	75
May 2, 1919	Dr. Helen Brown		Y. W. C. A. Girls Club	25
May 2, 1919	Dr. Helen Brown		Parent-Teachers Association	50

DIVISION OF CHILD HYGIENE

DIVISION OF CHILD HYGIENE

HERMANN M. BIGGS, M.D., *Commissioner of Health, Albany, N. Y.:*

SIR.— I have the honor to submit the following report on the work of the Division of Child Hygiene for the year 1919.

During 1919 the activities of the Division of Child Hygiene have included the initiation and demonstration of measures to secure the proper organization, establishment, maintenance, extension, standardization and coordination of the needed agencies to protect adequately and effectively the lives and health of children in the communities of the State of New York outside of New York City.

Through the conduct of child hygiene campaigns and exhibits, the preparation and distribution of literature, the giving of public lectures on the various phases of child hygiene, the visitation of and assistance to local child hygiene agencies including stations and nurses, day nurseries and other child caring institutions, the establishment of Little Mothers' Leagues, efforts to secure the pasteurization of cows' milk for consumption by children and similar activities the Division has striven to further the interests of the children of the state of New York. The results obtained have been very gratifying and give every indication that during the coming year not only will the established work be continued more effectively but that the program of more intensive and extensive efforts which is contemplated will meet with the anticipated measure of suceess.

Child Welfare Campaigns

In order to show the need for and demonstrate methods of carrying on child hygiene activities, surveys were made and campaigns conducted in various parts of the State. In some localities it was necessary to arouse an interest in the entire subject because no previous work had been done therein; in others an interest already awakened, and activities engaged in, required stimulation in order to secure a more vigorous and effective prosecution of efforts; in a third group lagging interest and efforts had to be rearoused, and in a fourth some special phase of child hygiene activity required introduction and stressing.

With the cooperation of the county chapter of the American Red Cross, a comprehensive campaign was carried out in Westchester County consisting of the showing of a miniature child hygiene station, exhibits including panels, posters, slides, motion pictures, models of complete outfits for the proper feeding, hygiene and care of children and prospective mothers, demonstrations of methods, the distribution of literature, the giving of lectures, the holding of mothers' meetings and better babies and baby improvement contests, the weighing and measuring of children, children's health conferences, and special clinics. From one day to one week was spent in a locality and 29 localities were covered. Similar efforts were made in 36 other localities in other sections of the State. These campaigns resulted in the appointment of a number of nurses for child hygiene work, the establishment of new child hygiene stations and the organization of many Little Mothers' Leagues. The necessary follow-up work is being carried out by the local agencies with assistance from this Division.

One of the most valuable features of these campaigns is the so-called children's health conference. This consists of the complete examination of infants and older children with a view to determining their growth and development and freedom from disease or disability. When any defects are found recommendations are made as to necessary changes in hygienic regimen or further medical observation and treatment. Actual treatment is not given, the cases being referred to their own physicians. Follow up by the local agencies to see that the recommendations are carried out has been advised as essential. It is intended to conduct as many of these conferences as possible during the coming year.

Child Hygiene Stations

While much of the child hygiene work requires home visitation a large share of it, including the necessary education and supervision, can be carried out only at child hygiene stations where there is a physician in attendance and where the public health nurse gives much of her instruction and many of her demonstrations. During 1919 there were established 46 new child hygiene stations in 16 municipalities, making a total of 162 such stations in 83 localities in the State exclusive of New York City. The stations were visited by members of the staff of this Division and necessary assistance rendered them. Originally established as infant welfare stations some of these stations are now engaged in prenatal work, others in work with the child of the preschool period, and a few take up all three periods, *i. e.,* prenatal, infancy and preschool.

The amount of work performed at the stations was very largely increased during the year and its character showed marked and progressive improvement. The child hygiene stations are amply demonstrating their value. In some instances there have existed difficulties but these are gradually being overcome. Some of the stations are not open all the year because of lack of sufficient funds or personnel or both. Although the number of municipalities which have assumed the support and conduct of these stations has increased, the number in which such stations are privately maintained and where public funds and direction by local health authorities should be provided is still too large.

Elsewhere in this report the matters of maternity care and care of the child of the preschool period are discussed. Here it is only intended to state that it is necessary to extend the work of infant welfare stations to include the other activities enumerated. Such handicaps as lack of available funds and personnel and the difficulties of making contact with prospective mothers and of retaining contact with the mothers of older children can and should be overcome and the hitherto strictly infant welfare stations be made complete maternal and child hygiene stations.

In order that child hygiene activities may be more effectively carried out in local municipalities, it is very desirable that their health organizations include a division of child hygiene. There are now twelve cities provided with such divisions as integral parts of their health departments.

Nurses

The importance of the public health nurse in connection with all phases of health protection activities is well recognized; her value in the field of child hygiene is very great. It is generally agreed that where no other agencies are available, a well qualified public health nurse performing her duties efficiently alone will accomplish very good results. In fact, under existing conditions, in strictly rural sections where the services of child hygiene stations are not readily available, those of a public health nurse should be provided. During the year more than 100 new public health nurses were employed in various localities of the State exclusive of New York city, bringing the total of such nurses beyond 1000. Local nurses engaged in child hygiene work were visited during the year by the supervising nurses of this Division and necessary assistance rendered them. In rural communities, public health nurses, as a rule, engage in all branches of health protection work, while in cities they often specialize in tuberculosis, child hygiene, school nursing, etc. Almost all public health nurses, however, are concerned to a greater or lesser extent with child hygiene.

Day Nurseries

As a result of existing economic and industrial conditions, there have been established and are now in operation in many of the municipalities of the State, institutions for the day care of infants and young children, known as day nurseries. Conducted as a rule by private organizations, the majority of these day nurseries exist as separate units, without any integral connection with other child welfare institutions or agencies. It has been the practice heretofore to have these institutions visited by the supervising nurses of the Division in the course of their inspections of child hygiene stations. The persons in charge have welcomed suggestions from the Department relative to the conduct of their institutions and good cooperation has always obtained. The character of the work of the day nurseries has on the whole shown progressive improvement from year to year. A careful study of the entire question of day nurseries was made during the year and among other findings the following are of interest. Of 29 institutions located in 22 municipalities, 19 are supported entirely by private funds and 10 in part by such funds and in part by public appropriations; 16 of the institutions are incorporated and 13 are not, 22 are not licensed and the licensing of the other 7 is not of an entirely satisfactory character.

These institutions care for about 900 children daily, ranging from 30 in the smallest to 110 in the largest. In only 15 of these institutions is a physical examination of the child made on admission. In the case of 19 of these day nurseries a physician visits the institution only when called, as needed; in one he visits daily, in another three times a week, in another twice a week, in four others once a week and in one other his visits are made once a month; one institution is visited daily by a nurse. Only 17 of these nurseries have facilities for isolation.

After careful consideration of the entire matter the Public Health Council amended the Sanitary Code and provided for the regulation of these institutions in Chapter VIII of the Sanitary Code, as follows:

CHAPTER VIII

Boarding Houses

> "**Regulation 1.** No license shall be issued by the board of health of any city or town under the provisions of section four hundred and eighty-two of the Penal Law to any person to receive, board or keep any nursing children or any children under the age of twelve years not his relatives, apprentices, pupils or wards, without legal commitment, or to maintain a day nursery, unless the health officer or person performing the duties of health officer of such city or town shall have made an inspection of the premises proposed to be occupied by such children, and shall have filed a written report thereon with the local board of health. Such inspection shall include an examination of each room proposed to be occupied by such child or children, and of the sanitary condition of the premises. * * *
>
> **Regulation 3.** Every such license issued by the board of health of any city or town shall be on a form to be prescribed by the state commissioner of health. Every such license shall expire on the thirty-first day of May after its issue, and may be renewed after a reinspection of the premises by the local health officer and a written report thereon to the local board of health. The licensee shall comply with such special rules and regulations as may be promulgated from time to time by the state department of health. Any such license

may be revoked at any time by the state commissioner of health or by the board of health issuing the same.

Regulation 3a. Every day nursery shall have attached thereto a physician of its selection, duly licensed under the laws of the state and in good professional standing, and immediately upon the appointment of such physician the day nursery shall notify the local health officer and the state department of health of the name and address of such physician. Such physician shall perform such duties as may be prescribed by the state department of health or by the authorities of such nursery, and shall make a physical examination of each child before admission, and make a systematic semi-monthly examination of every child regularly attending."

These regulations will be supplemented by special departmental regulations. Day nurseries present good opportunities for effective work with children of the preschool period and good cooperation on the part of these institutions is anticipated in initiating and continuing efforts in this direction.

Little Mothers' Leagues

It is well known that in many households the older girls must of necessity care for the baby and other younger children. These same girls will in most instances later become mothers themselves. For these reasons, they should be taught certain of the practical phases of the feeding, hygiene and care of infants and older children. To meet the need for such instruction, during the past several years Little Mothers' Leagues have been established in the schools, public and parochial, through the joint efforts of the State Department of Education and the State Department of Health. The members of these Leagues are given such simple, practical instruction based on a syllabus provided by this Division, as is advisable and desirable. The results of this educational work have been evident for some time. In localities where there are Little Mothers' Leagues, babies are better cared for.

During the year these Leagues were increased by more than 100 regarding which reports were received and many thousands of members were graduated.

Literature

The compilation and revision of literature was continued during the year. The pamphlet on "Milk and Its Relation to Public Health," and that on "Child Welfare Stations" and the preparation of a new pamphlet on Prenatal Care was begun. About 350,000 piece of child hygiene literature were distributed.

Two new films dealing with child hygiene, entitled "Our Children" and "The Priceless Gift of Health," were secured and shown in various parts of the State.

The forwarding of a letter to brides advising them of the necessity for proper prenatal care was continued with very satisfactory results.

Lectures, Conferences, Etc.

More than 100 lectures on various phases of child hygiene activities were delivered in various sections of the State and elsewhere. A large number of conferences, national, state and local were attended by members of the Division staff and many papers were read.

The Division continued its efforts to stimulate improvement in birth registration and eye prophylaxis in the case of every newborn child, the adoption of pasteurizing ordinances by local municipalities and other measures for the health protection of children. It cooperated in recommending the establishment of separate units for the care of tuberculous children at Ray Brook and with the State Board of Charities and the State Education Department in relation to the health of children under their supervision.

In addition to that of a routine character a large amount of correspondence was had with various individuals and public and private organizations concerning the above and numerous other phases of child welfare such as prenatal care, maternity and children's hospitals, care and feeding of children, diseases of infants and children, the sale of milk and cream, milk expositions, legal authority for village board to support child hygiene stations and the like. Much advice and assistance were requested by and given to agencies in other parts of the country.

The supervision of midwives heretofore carried out by the Division of Vital Statistics has been transferred to this Division to be assumed for the coming year.

The end of the year 1919 marks the completion of the sixth year of the functioning of the State Department of Health under the provisions of the new Public Health Law and with its reconstructed organization including a Division of Child Hygiene. It may therefore be of interest to indicate briefly some of the rapid strides made in the field of child hygiene as shown by the following: During the six year period from 1908 to 1913 inclusive, an average of 10,632 infants under one year of age died each year in the State exclusive of New York City, whereas in the period from 1914 to 1919 inclusive such deaths averaged only 9,908 per year. In 1913, the deaths of infants under one year of age totalled 11,262, whereas for 1919 the figure is only 8,112. The infant mortality rates for the first period are almost 125 each year and for the second a little more than 97 and in 1913 120 babies under one year of age died for every 1,000 babies born alive while in 1919 the rate was only 85 per 1,000 living births. In view of the fact that birth registration has not been very complete until recently and the figures for infant mortality in earlier years have therefore been somewhat too high, the following percentages of total deaths at all ages formed by the infant deaths are offered. The average for the first period was 15.4 per cent and for the second 12.61 per cent; in 1913 the percentage was 15.8 and in *1919* it was only *8.49* — reduced to almost one-half. The figures for the children of the ages from one to four inclusive also show a pronounced improvement. From 1908 to 1913 there died each year 3,662 children over one and under five years of age and from 1914 to 1919 inclusive these deaths averaged 3,637 each year. For 1913 the figures are 3,619 and for 1919, 2,974. Here again a good index of the results obtained is furnished by the fact that for the first of the above-mentioned two periods, the per cent of total deaths, which occurred in the age group under consideration was 5.26, and for the second period it was only 4.74. In 1913 this percentage was 5.07 and in 1919 it was 4.31.

The following excerpt from a report of the Division of Vital Statistics, regarding mortality in the State as a whole, is indicative of the highly satisfactory results being secured in respect to the saving of child and maternal life.

> "The infant mortality was 83 as compared with 97 in 1918 and the five year average of 98, from which it decreased more than 15 per cent; the death rate of children under five years of age declined 25.8 per cent below the average . . . diarrhea and enteritis (under 2 years), one of the chief causes of infantile mortality, showed a decrease of more than one-third below the average; congenital debility and malformations (also very important causes of infantile mortality) were almost 20 per cent less; puerperal septicemia, an important cause of maternal mortality, showed a decrease of 30 per cent."

It is worthy of note that in the entire country Lackawanna, a city in this State in which special child hygiene efforts have been made, showed the largest improvement in the saving of infant lives, the decrease in its infant mortality during the year 1919, being 74 per thousand births. The following comparison of the 1919 birth and infant mortality rates for New York State and England, Wales and Scotland, based on data furnished by the Vital Statistics Division, is of interest. In New York State, the birth rate was 20.8, in England and Wales 18.5 and Scotland 21.7. The infant mortality rates were 83 for New York State, 89 for England and Wales and 101.6 for Scotland. (The infant mortality rate for England and Wales is the lowest rate for one year on record for these countries.) In 11 cities of New York State each exceeding 50,000 in population, the birth rate was 22.2 and the infant mortality rate 84, whereas for 96 great towns of England and Wales each with a population in excess of 50,000 the birth rate was 19.1 and the infant mortality rate 93. One hundred and forty-eight smaller towns in England and Wales, with populations from 20,000 to 50,000 had a birth rate of 18.4 and an infant mortality rate of 90; 16 New York State cities of the same population group gave 21.3 as the birth rate and 82 as the infant mortality rate. In view of the fact that as the result of the Department's efforts since its reorganization the birth registration of New York State is now practically complete, the above figures are properly comparable.

Future Needs

The reduction of infant mortality and morbidity has been very pronounced and the number of well babies who have been kept well has increased very rapidly. To what an extent these accomplishments are a source of real gratification will be even better appreciated when the following is carefully considered, as will the necessity for an extension and intensification of efforts.

Maternity Care

Heretofore the efforts made for the improvement of the life and health chances of infants have in most instances begun with the individual child after its birth; too often not until the infant had, if fortunate, been able to survive the first few most hazardous months of its existence. The importance of beginning with the expected infant as soon after conception as possible has been appreciated by the workers in the field of infant welfare as has the necessity for caring also for the prospective mother. For this failure to attack the problem at its very root no adverse criticism attaches to those who have devoted themselves to child welfare activities. For a number of reasons they have been compelled to exert their efforts in the direction possible at the time. The problem presented by maternal mortality and the mortality of infancy due to prenatal and natal causes is clearly indicated by the following figures for this State, exclusive of its largest city. Although conditions in New York are appreciably better than those which obtain in the country as a whole they are far from satisfactory.

During the three-year period 1915, 1916 and 1917, there were reported an average of 618 deaths each year of women of child bearing age (15–44 inclusive) from conditions due to pregnancy or childbirth. These deaths constituted more than 10 per cent of the total deaths of women of this age group. The fact that one maternal death from these causes was recorded for every 165 live births reported more definitely reveals the actual conditions. The figures for 1919 are 620 deaths (9.26 per cent) with 1 maternal death for each 151 live births. During the above mentioned three-year period the reported stillbirths averaged each year 3,902, one for each 26 live births. During 1919, 3,584 stillbirths, one for each 28 live births, were reported. Of infant deaths (under 1 year) an average of 4,438 deaths (45 per cent of the total) were charged to premature birth, congenital debility and malformation during the three-year period and during 1919, 3,936 (47 per cent of the total) died from these causes. While no complete figures for morbidity are available, it is known that the amount of illness, suffering and disability is enormous.

Most of the maternal deaths are preventable, as are very many of the stillbirths and the majority of the infant deaths due to prenatal and natal causes. Most of the illness and disability is either preventable or at least remediable if discovered early.

Infancy

That the unborn infant encounters great risks during its prenatal life has been previously indicated; that during its first year of postnatal life its risks are very great is well known. The chances against an infant's surviving are greatest during the first quarter of its first year; they become less so as the infant becomes older although in the second half of the first year they are again increased to an extent by the entrance of new factors. There are three sets of factors which are operative, those before birth, the antenatal, those at the time of birth, the natal, and those after birth, the postnatal. The last group depends to a large extent upon the environment in which the infant finds itself. The influences affecting infantile mortality have been classified as the social, the sanitary and the maternal. The social influences include the age of the mother, the state of the parents as to marriage insofar as this affects the legitimacy of the child, poverty and social condition and the employment of the mother. The sanitary influences comprise the place of birth (whether in rural or urban districts), the sanitation of the environment and that of the home, including cleanliness, overcrowding, etc. The maternal influence, of prime importance, is essentially the mother's knowledge of mothercraft. Detailed discussion of these factors and influences it is not practicable to give here. Suffice it to say that a careful study of the specific causes of death in infancy shows that the greatest reduction has taken place in the group of deaths due to conditions which are most susceptible to public control, namely the communicable diseases as such, and the gastro-intestinal disturbances, the so-called "summer complaints." During the years 1915, 1916 and 1917, out of an average of 10,022 infant (under 1 year) deaths each year, only 434, (4.5 per cent) were caused by the communicable diseases. The period of infancy has shown the benefits accruing from a more effective control of community infections. Diseases of the digestive tract, mainly diarrhea and enteritis, were responsible for 2,326 (22 per cent) a very marked reduction. This great decrease in the diarrheal diseases, many of which can be directly attributed to impure milk, carelessness or neglect in the preparation of the milk or the sterilization of utensils, improper feeding, or indifference to or disregard of the rules of hygiene, has been due in large measure to the control and regulation of the milk supply, the pasteurization of milk and other sanitary procedures and to constant and continued education. Extending and more effectively carrying out the measures already in operation will result in a still further improvement with respect to these conditions.

The diseases of the respiratory tract present a much more difficult but by no means hopeless problem. This group, almost all bronchopneumonia and bronchitis, were responsible for 1,548 deaths (15 per cent). In many of the larger cities of the country, with the marked reduction of the deaths from diarrheal diseases, those due to respiratory tract diseases have assumed a relative importance second only to the prenatal and natal group. That the diseases of the respiratory tract are very largely preventable and controllable has been conclusively demonstrated by the results obtained in localities where efforts specially directed against them have been made. Their prevention and control is more difficult because of the very intimate and important part played in the transmission of these diseases by the environment both of the household and outside of it and the great opportunities for contact infection which exist. A continued aggressive campaign of education, with particular stress on the dangers of contact infection, especially the matter of unguarded coughing, sneezing, etc., on the necessity for proper treatment at the earliest possible moment and of other measures analogous to those used during the recent influenza epidemics should prove of great value. Although brilliant results should not be looked for, those of a substantial character should be obtained.

In 1919 there were a total of 8,382 infant deaths. Of these the communicable diseases were responsible for 412 (4.9 per cent); the respiratory diseases for 1,329 (15.8 per cent); diseases of the digestive system for 1,734 (20.6 per cent); congenital debility and malformation and premature birth for 3,936 (47 per cent) and all other causes for 971 (12 per cent).

The Child of Preschool Age

Just as the infant welfare worker has discovered that the most effective results cannot be secured in infant welfare work without the proper prenatal efforts, so the school medical worker has come to appreciate the fact that the best results cannot be obtained in the case of school children without the proper efforts with children of preschool age. Since so many of the diseases and disabilities encountered among school children are preventable or at least more easily remediable during the preschool period, work with children of this group results in a reduction of the work with school children and in better accomplishment of that which remains to be done.

Mortality figures for New York State exclusive of New York City show the following with respect to children from one to four years inclusive. In the three-year period 1915, 1916, 1917, there were an average of 3,398 deaths each year (poliomyelitis epidemic in 1916) of children of this age group, these deaths constituting 4.63 per cent of the total deaths at all ages. Of these deaths, 1,097 (32.3 per cent) were due to the general diseases, mostly the infectious diseases, 804 (23.7 per cent) to diseases of the respiratory tract, 755 (22.31 per cent) to diseases of the digestive system, 293 (8.34 per cent) to diseases of the nervous system and organs of special sense, 286 (8.42 per cent) to external causes, including accidental and homicidal deaths, and 163 (5 per cent) to all other causes.

For 1919 the figures are: total deaths 2,974 (4.31 per cent of all deaths at all ages) including 1,123 (37.7 per cent of total) due to general diseases, 721 (24.2 per cent) to respiratory tract diseases, 519 (17.4 per cent) to diseases of the digestive system, 300 (10.08 per cent) to external causes (accidental and homicidal), 152 (5.1 per cent) to diseases of the nervous system and special sense organs, and 159 (5.5 per cent) to all other causes. Important as is the mortality of this age group, the morbidity is very much more so, as is shown by the very large number of children of this group who have more or less serious disease or disability.

Although in some respects the risks to be run by the child from its first to its fifth birthday include those encountered by the infant and those met by the school child they are in many other respects quite distinct. In fact the ex-baby or runabout presents to a very large extent, a different problem from either the baby or the child of school age. For the failure to attack this problem which failure has resulted in the making of this period the " no-man's land " of childhood, there have been advanced many reasons such as lack of funds, shortage of workers, expediency, and the difficulty of securing the cooperation of the mothers whose time is occupied with the baby, school children and those engaged in gainful occupation. Obviously these obstacles are not insuperable. Although the argument that since the entire matter is one so largely involving the question of finances and that where available funds are limited these should be expended wholly upon the period of infancy, with its greater mortality, has much weight, it loses some of its cogency when the problem is viewed in the light that the ex-baby, who has demonstrated his ability to weather the storms and stresses of infancy, is perhaps more worth while saving insofar as the state is concerned and that a concentration of effort on this group would be of great value.

The necessity for intensive and extensive activities in the field of the child of the preschool period is undoubted and their value unquestioned.

Meeting the Needs

In order to properly meet the indications presented by the preceding, the following generally accepted minimum requirements for the health protection of prospective mothers and children should be met.

A. Education and instruction of the general public and of special groups in the problem presented by maternal, infant and childhood mortality and morbidity and their solution in order to arouse the necessary interest and secure essential support and cooperation.

B. Specific instruction and supervision by physicians, private and public, and public health nurses at home and at health centers.

(I) Maternity
  (a) Hygiene of pregnancy and early infancy
    (1) Through at least monthly visits throughout pregnancy to private physicians or to health center until the end of the sixth month and every two weeks thereafter
    (2) Literature to be given mother to acquaint her with the principles of the hygiene of pregnancy and of early infancy
  (b) Puerperium
    Daily visits through the fifth day and at least two other visits during the second week by physician or nurse
  (c) Insuring that every infant is placed under continuous health supervision from birth
(II) Infancy and preschool period
  Instruction of mothers at least once a month throughout the first year and at regular intervals throughout the preschool period in the care and feeding of children.
  (a) Instruction of mothers at home
    (1) Value of breast feeding — stressing its importance during at least the first six months
    (2) The technique of nursing
    (3) Technique of bath, sleep, clothing, ventilation and general care of the baby with demonstrations
    (4) Preparation and technique of artificial feeding
    (5) Dietary essentials and selection of food for infant and for older children
    (6) Prevention of disease in children

C. Periodic examinations (by physicians)

(I) Maternity
  (a) Complete physical examination as early in pregnancy as possible including examination of heart, lungs, abdomen and urine and the taking of blood pressure
  (b) Internal examination and pelvic measurements before the seventh month in primipara
  (c) Examination of urine every four weeks during early months, at least every two weeks after sixth month and more frequently if indicated
  (d) Wassermann test when indicated
  (e) Examination, before discharging patient from observation, not later than six weeks after delivery
(II) Infant and preschool children
  (a) Periodic examination of all children of this group. Weighing and measuring under supervision of physician

(b) Health record for every child from birth

(c) Follow up by nurses to see that all recommendations for hygienic and corrective treatment are carried out.

For health education and supervision all proper efforts will be made to have new child hygiene stations established where needed, to extend the work of such stations to include the prenatal, postnatal and preschool periods in addition to that of infancy, and to have a sufficient number of public health nurses employed in every municipality. Similar steps will be taken to secure adequate provision for the proper clinical care and treatment of all prospective mothers and children, including, as part of or in addition to that provided by private physicians and bedside nurses at home, general and special hospitals and clinics for maternity cases, children, etc., and for tuberculosis, dental, venereal diseases, and eye, ear, nose and throat, skin, orthopedic and other defects and diseases. The establishment of open air classes and rest periods for pretuberculous and certain tuberculous children with grave malnutrition will be urged as will special classes for children needing some form of special instruction due to physical or mental defect, nutrition classes for physically subnormal children, and the maintenance of mid-morning lunches or hot noonday meals when necessary.

Personnel

The scope, character and extent of the activities heretofore engaged in by the Division have completely utilized all the time and energies of the members of its staff. The necessary extension of the work of the Division as indicated in this report will require the services of additional personnel for the Division, including an Assistant Director, a Supervisor of Child Hygiene Stations, a Diagnostician and Lecturer, at least four new supervising nurses and more stenographic and clerical help. It is sincerely hoped that these increases may be granted so that the activities of the Division may be effectively directed toward securing the most complete accomplishment of its proposed program.

The undersigned assumed charge of the Division of Child Hygiene on October 1, 1919, relieving Dr. H. L. K. Shaw.

Respectfully yours

M. EDGAR ROSE

Director

DIVISION OF TUBERCULOSIS

DIVISION OF TUBERCULOSIS

HERMANN M. BIGGS, M.D., *Commissioner of Health, Albany, N. Y.:*

Sir.—I have the honor to submit the following report on the work of the Division of Tuberculosis for the year 1919.

The activities of the Tuberculosis Divison during 1919, in addition to functions of a regulatory character, comprised essentially the determination of the needs and facilities for effective campaigning against tuberculosis, the initiation and demonstration of preventive measures and the stimulation of their adoption by the local communities of the State, the rendering of advice, assistance and cooperation and the standardization, supervision and coordination of the work of all agencies concerned.

During the year 25,136 cases of tuberculosis were reported to the Division. The efforts to secure the discovery of all cases in order to bring them under the necessary medical and sanitary supervision at the earliest possible time were markedly intensified and the results are already evident. The ratio of reported cases of tuberculosis to reported deaths from this disease for the year 1919 was 1.77 to 1 for New York City and 1.86 to 1 for the remainder of the State. Elsewhere in this report are given figures for two periods of years preceding 1919. The well marked improvement in the reporting upstate begun in 1914 was greatly accelerated during 1919. There occurred 14,352 deaths from tuberculosis as reported to the Division of Vital Statistics. The number of deaths from tuberculosis was 14,352 and the rate 132.0, as compared with 16,973 deaths and a rate of 158.9 for 1918 and 16,322 deaths and a rate of 161.4, the average for the five year period 1913–1917 inclusive.

There were 7,668 sputum examinations made at the State Department of Health Laboratories at Albany and New York City of which number 1,722 were positive, 5,922 negative and 24 unsatisfactory. For 1918 the figures are 6,434 examinations, 1,512 positive, 4,848 negative.

The pronounced improvement in the sanitary supervision of cases noted during 1918 was more striking during 1919 as was that with respect to the distribution by local health authorities of prophylactic supplies, their follow-up of reported cases and the cleansing, renovation and disinfection of premises vacated by such cases. The keeping up to date of the records of reported cases begun in 1918 was continued in 1919 and, through local cooperation, the necessary information for authorized field workers was made more readily available. Information with regard to the status of reported cases at all times is becoming more and more complete.

Inspection, studies and constructive criticisms were made, advice and assistance given and approval or disapproval given in regard to the selection and utilization of sites, the preparation of plans for and the construction of new tuberculosis institutions and of additions to and alterations and modifications of those in operation and in connection with the equipment, organization and management of such hospitals. Twenty-three sites located in 14 counties were visited one or more times. The site for the proposed Westchester county tuberculosis hospital, which was approved by the Commissioner, but disapproved by the local health officer, was on appeal to the board composed of the Lieutenant Governor, Speaker of the Assembly and Commissioner of Health, finally approved.

One or more sets of suggestive plans for new tuberculosis hospitals or alterations, modifications and additions to existing institutions were prepared and distributed to the local authorities or their representatives in seventeen counties. Such plans were also provided to a number of agencies outside the state, including those in the United States army hospital at Oteen, North Carolina, in Texas, Montana, France and Belgium. One or more inspections of construction of fourteen hospitals were made. During the year five new institutions were completed; the new Broome county hospital of 775 beds at Chenango Bridge, the Rensselaer county institution of 208 beds at Wynantskill, that for Rockland county of 50 beds capacity at Pomona, the Nassau county hospital of 100 beds near Farmingdale, and the Chautauqua county hospital of 82 beds capacity at Lilydale. The institution for Columbia county of 43 beds capacity, located at Philmont, and that for Delaware county of 30 beds capacity located at Delhi, were almost completed by the first of this year and the Herkimer county hospital of 62 beds capacity near Dolgeville was begun and its construction well advanced at the end of the year. Alterations, modifications and additions to a number of the institutions in operation were also completed, actually begun or the preparations so far advanced as to make their carrying out a certainty. Madison county contracted with Chenango county for the care of its patients.

There are now 37 public tuberculosis hospitals in the State of New York exclusive of New York City's institutions, 33 of which take county patients, one, the Yonkers municipal hospital, for the care of cases from that city, and one, the State institution at Ray Brook, for the care of incipient cases from the State as a whole. Thirty-five counties now have permanent provision for the care of their tuberculous population and a number of others provide for their cases whenever and wherever possible. There are in addition 7 private and semi-charitable institutions.

Inspections and reinspections of the hospitals in operation were made. Recommendations previously made for improvements were in a large measure carried out. The tuberculosis institutions in operation performed a most valuable service during the year and they are conclusively demonstrating their value. Not only were the capacities of all well utilized, but in an increasingly large number of cases the limit was reached or exceeded and in a number of instances a waiting list was more or less constantly in operation. The medical care of the patients and the administrative affairs of the hospitals, the performance of their duties by the boards of managers, the interest and appreciation shown, and the cooperation and assistance rendered by the boards of supervisors and all other public officials, the members of the medical and allied professions, the various private organizations and the general public, all showed a pronounced improvement as did the results with respect to the patients themselves. The equipment of the various institutions was especially improved, as were the medical care of the patients and the administration, and thus the hospitals functioned more efficiently as actual centers of the antituberculosis activities in their districts. The problem of providing additional facilities for the care of tuberculous children is still unsolved and calls for early action.

To perfect as far as possible the organization and administration of hospitals and the medical care of patients and to carry on permanent clinic service as mentioned elsewhere, the employment of full time superintendents in every tuberculosis hospital is essential. As the result of efforts of this Division, two institutions previously employing part time superintendents appointed men to serve full time. It is hoped and expected that in the remaining institutions where partial service is at present still supplied the same change will be effected.

A course of instruction was given at the State Tuberculosis Hospital at Ray Brook and was attended by nine county hospital superintendents. The instruction given in the technical phases of tuberculosis and in the principles and practice of hospital administration was very valuable to and appreciated by those who took the course. The opportunity to attend some of the sessions of the Trudeau School of Tuberculosis was an added feature and sincere appreciation is due this institution for its kindness and courtesy in so cooperating.

The tuberculosis dispensaries continued in operation during the year and performed valuable services. In a number of instances these clinics along with those for child welfare and the venereal diseases, dental clinics, etc., were organized into health centers. This arrangement is rapidly finding favor, and there is good reason to believe that during the coming year it will be extended to localities where the various clinics still operate more or less independently. The cooperation between tuberculosis hospitals and dispensaries is rapidly becoming closer and more effective.

The work of the tuberculosis camps and open air schools was continued during the year with very good results.

The supervision and assistance of public health nurses engaged wholly or in part in tuberculosis work was continued during the year with excellent results. The work of the local nurses showed marked improvement and is amply demonstrating the necessity for and the value of public health nursing service. A large number of new appointments were made locally and there are now 31 counties of the 57 in the State outside of New York City which have made provision for county tuberculosis nurses. In addition there are a very large number of city and village public health nurses engaged in tuberculosis work. The supply of properly qualified nurses available for public health work in general and for the special branches such as tuberculosis is still inadequate. In order to stimulate an interest in this type of work and to demonstrate the value and practicability of instruction in public health nursing as part of the course of instruction in hospital training schools and also to secure assistance in connection with the tuberculosis surveys that were held, short courses of instruction were given at the hospitals of Troy, Utica and Oneida. These courses were exceptionally well attended not only by the pupil nurses but also by graduate nurses located in and near these communities. The actual instruction given and the arousing of interest in public health nursing on the part of nurses engaged in bedside work and the demonstrating of the feasibility of giving such courses were all desirable results. For many of the nurses actually engaged in public health work, courses of special training would be both advisable and desirable and it is hoped that such courses may be made available in the near future.

The compilation of laws, regulations and agencies relating to tuberculosis, prepared in 1918, was completely revised and 3,000 copies issued during the year. Of the pamphlet entitled "What You Should Know About Tuberculosis" 71,000 copies were distributed as were 50,000 copies of the publication entitled "Sleeping and Sitting in the Open Air." The distribution of this literature is a very useful procedure and the appreciation of the recipients is constantly shown by numerous requests for copies for friends and relatives.

An especially valuable piece of educational work consisted in the showing in various sections of the State, to physicians, health officers and others interested, of a film on the diagnosis of tuberculosis prepared and kindly loaned by the United States Army Medical Department. Numerous conferences and meetings, formal and informal, with boards of supervisors and their committees, boards of managers, hospital superintendents, health officers, nurses and other public officials, medical societies, physicians, tuberculosis and other organizations interested and concerned with the tuberculosis problem and dealing with all phases of the tuberculosis campaign were held or attended in all sections of the State and elsewhere and papers were read and lectures delivered.

The State Civil Service Commission was cooperated with in the conduct of examinations of applicants for appointment as tuberculosis hospital superintendents and county tuberculosis visiting nurses. Cooperation was also established with other State departments including the State Board of Charities, State Department of Education and the State Architect in connection with hospitals, dispensaries, tuberculous school children, separate units at Ray Brook for tuberculous children and other similar matters. The assistance and cooperation of the Tuberculosis Committee of the State Charities Aid Association was of value. Aside from that of a routine character, a large amount of correspondence was had with organizations and individuals in this State and elsewhere regarding various phases of tuberculosis activities.

One of the most notable achievements during the year and one which gives every indication of accomplishing more than perhaps any other single line of activity was the conducting of tuberculosis clinics in a number of counties of the State.

Effective and harmonious cooperation of many agencies and the utilization of numerous procedures are necessary to meet the essential indications presented by the tuberculosis problem, namely,— the prevention of infection, insofar as possible, the prevention of the development of active disease in those already infected, and the guarding against recurrences in those persons in whom the disease has been arrested.

That the location of all cases at the earliest possible moment is the first step in this program is too well known to require extended comment. In New York State exclusive of New York City there has been since 1914 a substantial improvement in the location of cases as is demonstrated by the following figures which show the ratios obtaining between the number of reported cases and of deaths from tuberculosis for two periods of years. Such a ratio is the best index available at present of the completeness of the location of cases.

During the six-year period from 1908 to 1913 inclusive, the ratio of reported cases to deaths was 2.45 to 1 for New York City and for the remainder of the State but 1.1 cases to each death. The five year period from 1914 to 1918 inclusive, shows for New York City a ratio of 1.88 to 1, and for the remainder of the State a ratio of 1.73 to 1. This shows a well marked improvement.

A comparison of the figures showing the utilization of the laboratory service in the diagnosis of tuberculosis for the two periods mentioned above shows a similarly striking improvement. During the last five years practically twice as many examinations were made in the State Health Department Laboratories as in the preceding six years, more than twice as many were positive, and the ratio of negative to positive findings was increased from 2.49 to 2.80 to 1, demonstrating not only a much greater utilization of this service but also its more frequent employment in doubtful cases.

While really important progress is being made with regard to the location of cases, one essential, early diagnosis, is not being secured to the necessary extent. In support of this statement the following is submitted:

An analysis of 3,198 case reports (including duplicates and some institutional cases) of patients who died during 1918 shows 420 (13 per cent) reported after and 2,771 (87 per cent) prior to death. Of the latter group only 863 (27 per cent) were reported more than six months before death. A careful study of detailed records and actual experience in the field demonstrates that while such factors as lack of knowledge of the law, misunderstanding as to cases having been previously reported, and the desire to shield patients from the alleged stigma attaching to tuberculosis, are operative, they are so in but a minority of instances. Supporting this view, the results obtained in 1916 are offered, when after an especially aggressive follow-up, an average of only about 10 per cent additional cases were reported each month. The main difficulty lies in the failure to make early diagnosis. Of all the measures for the control of tuberculosis this is the most fundamental and vital. The interests of the individual and those of the community demand such early diagnosis, for it is by means of the discovery of the disease in its incipiency and by the placing of the patient under proper medical and sanitary supervision that an arrest of his disease is practically assured and the other members of the community are protected against infection. Yet it must be acknowledged, and the actual facts conclusively demonstrate, that such diagnosis is being secured in but a small minority of the cases. As a matter of fact the early cases with their far more favorable prognosis far outnumber those with advanced disease.

It should be thoroughly appreciated that no efforts looking to the betterment of the public health which do not take cognizance of man's inherent selfishness, manifested by his desire to benefit personally, can hope for the necessary measure of success. The failure to determine the existence of tuberculosis in an individual until the disease is so far advanced as to make the outlook for recovery hopeless will exclude the possibility of providing the benefits justly expected by those affected.

Furthermore, in order to secure the provision of adequate institutional facilities, nursing service, improved housing conditions and all of the other necessary instruments for the control of tuberculosis, a demonstration of the actual number of cases in a community, with the resulting demand for their care, will accomplish vastly greater results in a far shorter time than all of the general propaganda that may be carried on.

A concentration of effort on this phase of the tuberculosis problem should be directly and indirectly productive of greater benefits than any other procedure. Without early diagnosis all other measures must fail of any but partial results.

The most practicable and efficient means for securing early diagnosis lies in the instituting of periodic clinic services in every locality in the State. In counties where there is a tuberculosis hospital the superintendent and other members of the staff should act as examining physicians and consultants to the physicians of the county, supplying their services gratuitously. In counties where there are no such institutions similar service should be provided, the examining physician to be a recognized tuberculosis diagnostician who is not engaged in private practice in the locality. It is intended that efforts shall be made looking to the establishment of such clinic service throughout the State.

As a means of accomplishing these ends and in pursuance of the policy outlined in the report of this Division for the year

1918 a comprehensive program of state-wide tuberculosis clinics was put into effect by the State Department of Health through its Division of Tuberculosis and its local representatives, the district sanitary supervisors, in conjunction with the State Charities Aid Association through its tuberculosis committee and the local branches thereof, with the active assistance and cooperation of the State Tuberculosis Hospital at Ray Brook, the State Department of Education, local health officers and physicians, superintendents and medical staffs of local tuberculosis hospitals and dispensaries, local tuberculosis and other nurses engaged in public health work, social workers and other agencies, public and private.

In determining upon the counties in which to carry on the work, consideration was given to the known need for such work and its relation to the facilities available. Although the former existed to a greater or lesser extent everywhere, the latter differed so markedly that the several counties could be arranged into groups, one possessing practically no facilities, a second rather inadequate ones and a third having fairly complete machinery for supplying the proposed service. The state agencies provided all that was needed for the first group, made up the deficiencies for the second and initiated the work in the third, stimulating its continuance and rendering any assistance required.

The methods and procedures carried out were essentially as follows: After the selection of the county, it was divided into clinic districts and centers therein decided upon after a consideration of such factors as population, area, transportation facilities and local preferences for one city or village as against another. Physicians recognized as well qualified tuberculosis diagnosticians, but not in active private practice in the locality, were utilized as examiners, state agencies also employing for this purpose members of their own staffs. Conferences were held with local organizations and individuals concerned. Representatives of the state agencies perfected the local arrangements. The interest of local practitioners was aroused and their cooperation secured by means of addresses delivered at medical society meetings on the subject of the proposed clinics and the diagnosis of tuberculosis, the latter in many cases being demonstrated by a motion picture film prepared by the Medical Department of the United States Army. The individual physicians were requested by letter and in person to send their patients to the clinics and urged to attend themselves. The general public was informed as to the clinics by state-wide and local publicity, proper stress being laid upon the then recent epidemic of influenza and its possible effect upon those with tuberculous infection or active disease. Personal calls upon known positive cases, contacts and suspects were made by the nurses, who in no instance visited an individual or family under a local physician's care without the latter's consent.

At the clinics, in addition to the examinations made and advice as to treatment or necessary observation given, special consultations were held by the examining physicians with the local physicians who attended with their patients. Sputum bottles were supplied and the subsequent examination of the specimens was followed up by the nurses. Literature was distributed. Reports of all positive cases were made out and forwarded to the local health officers. Details as to the field procedures are supplied in the Tuberculosis Clinics (March, 1920) issue of the HEALTH NEWS.

The immediate direct results have more than exceeded expectations and have made the expenditure of efforts and finances well worth while. Other less direct consequences and future benefits which may be confidently anticipated are such as to justify belief in the value of these clinics and the necessity and advisability of continuing them as a permanent measure.

Until the end of 1919, 233 clinics have been held in 36 counties. In many localities more than one clinic has been conducted and in a large number they have become a permanent feature of the local tuberculosis activities. The attendance at the clinics has been very large. In cases where second or subsequent clinics have been held in the same locality the attendance at the later clinics has usually been two or more times larger than that of the first. Because of the large number of applicants it has often been necessary to continue beyond the original date. In many cases the number of examining physicians originally provided has had to be increased, and at all the clinics the time of these physicians has been fully occupied.

Eight thousand six hundred and nineteen patients have been examined at 233 clinics, of which number 1,485 (17.22 per cent) were found to be positively tuberculous and 1,703 (20 per cent) were designated as suspicious. Of 783 positive cases, 523 (66.7 per cent) had not been reported previously as having tuberculosis This number of unrecognized or at least unreported cases discovered at the clinics is very significant. In one district, out of 56 cases diagnosed as positively tuberculous, 50 had not been reported. While this instance is not typical of the conditions which have obtained generally, it warrants special mention.

The interest shown and cooperation given by local health officers and physicians is demonstrated by the large number of patients under their care who were examined at the clinics and by their own attendance. The efforts made and assistance rendered by the cooperating agencies and individuals have been a large factor in the success of the undertaking.

The demonstration of the local needs for more adequate facilities for the campaign against tuberculosis has already begun to bear fruit in the taking of definite steps to provide additional hospital accommodations, to employ more public health nurses and to remedy other existing deficiencies. Most important of all, a definite concentration of effort on early diagnosis has eventuated. Figures now available show that in New York City during 1919, the ratio of reported cases to deaths was 1.77 to 1, and for the remainder of the State it was 1.86 to 1. This is not only a reversal of the relative positions of the two sections of the State, but a very marked improvement for the State exclusive of New York City.

Extremely important as is the public health problem that tuberculosis presents and valuable as have been the direct results of its study, those of an indirect character have also been very substantial. The very useful role of the tuberculosis campaign as a trail blazer for other lines of health protection activity is one which all concerned have recognized. While this factor must not be lost sight of, neither must it be forgotten that completely satisfying results in the control of tuberculosis can never be obtained without an effective and unselfish coordination of this campaign with all others dealing with health protection. It is submitted that for these purposes the tuberculosis clinics point a way which should prove of very practical value.

In all communities, urban as well as rural, there are very many individuals who either can not or will not avail themselves of scientific medical and surgical treatment. Only an insignificant minority of the population utilizes the opportunities of periodic medical examinations for having existing physical defects, disease or disability detected, conditions favorable to the development of disease discovered and methods of correction indicated. In many communities the necessary facilities in the way of hospitals, dispensaries, and nursing service are either wholly lacking or inadequate to supply the needs. The rapid advances made in the various branches of medicine and surgery in recent years have necessitated the development of groups of specialists. It is rapidly becoming manifest that for the making of accurate diagnosis coordinated groups of specially qualified physicians and surgeons are necessary. The general practitioner, whose prime importance will never be diminished, often needs and desires for his patients consultation and advice by medical and surgical experts as to treatment and constantly requires the assistance rendered by clinical, bacteriological and chemical laboratories, x-ray and similar service. Public health nursing services adapted to and adequate for the various types of communities, adequate school medical inspection, the dissemination of public health information and the best possible enforcement of the Public Health Law and administration of public health activities are absolutely essential. To provide all of these it is now proposed that there be established health centers to include hospitals, clinics for out-patients, laboratories, x-ray plants, medical libraries, a district health service, a public health nursing service, a center for school medical inspection, and headquarters for all health, medical, nursing and other public welfare activities.

There can be no question that, when viewed from the broad standpoint which this matter merits, the creation of such health centers offers the only practical means of effectively meeting the situation which already exists and which will be intensified in the future unless proper remedial steps are now taken. The expenditures of money and effort which this proposal entails will be considerable, and unless the proper appeal is made to those concerned, namely, the general public, they will be rather difficult to secure in many cases. It is believed that no more effective means for securing the establishment and maintenance of such agencies can be employed than the making of an appeal to the perfectly proper and biologically necessary inherent selfishness of individuals by the demonstrations of specific individual personal needs such as have resulted from the tuberculosis clinics. If the program of state-wide tuberculosis clinics shall have served no other purpose than that of pointing the way for this, it will have more than justified its initiation and execution.

The activities of this Division have been very extensive and the time of its personnel has been more than fully occupied. The necessary extension and intensification of its efforts, the increase in the number of hospitals, dispensaries and nurses, and the continuance of the conduct of clinics throughout the State require an increase in personnel if the work of the Division is to be effectively done. There is needed a Supervisor of Tuberculosis Hospitals and Dispensaries, at least three additional supervising tuberculosis nurses and more stenographic and clerical help. It is hoped that these additions to the staff may be provided for the coming year.

On October 1, 1919, Dr. Malcolm F. Lent was appointed Supervisor of Tuberculosis, to succeed the undersigned, who was transferred to the position of Director of the Division of Child Hygiene.

During the year 1919, 12,441 cases of tuberculosis were reported to the Division as compared with 10,125 reported during 1918. An analysis of these cases shows the following with respect to some of the more important features: Of the 12,441 cases received, 10,566 (84.92%) were new cases; 10,265 (82.5%) were reported but once; 2,012 (16.17%) were reported previously; and 301 (2.41%) were reported elsewhere subsequently, the latter being included in the total of new cases.

Including 1,019 marked "tuberculosis" unqualifiedly (which for well-known reasons may safely be presumed to be pulmonary) and 415 designated "pulmonary complicated with other forms," 11,887 (95.54%) have disease of the lungs. If to these are added 72 cases reported "laryngeal tuberculosis" (unquestionably secondary) there are 11,959 (96.12%) cases with disease of the respiratory tract, the ordinarily communicable forms of tuberculosis. In 2,450 (23.43%) of the 10,453 cases specified as "pulmonary tuberculosis" the stage of the disease was given as "early," in 6,180 (59.12%) "advanced" and in 1,823 (17.43%) the stage was not given. Of tuberculosis of parts of the body other than the respiratory tract, there are 619 cases, including 171 with meningeal diseases, 121 bones and joints, 88 lymph glands, 71 peritoneal and 168 other forms.

Classified according to age and sex, there are 6,816 males and 5,397 females divided into groups as follows: 202 males and 164 females under five years of age; 406 and 484 from 5 to 14 years; 434 and 512 from 15 to 19; 3,543 and 3,037 from 20 to 39; 1,845 and 938 from 40 to 59; and 386 and 262, respectively, sixty years of age and over. Between the ages of 15 and 59 there are 10,309 (84.41%) cases, 6,580 (53.87%) being in the 20 to 39 group. In 352 cases (188 males and 164 females) the age was not given and in 13 cases neither age nor sex was stated.

With respect to sputum findings of 5,463 cases in which this was specified, 4,546 were positive and 917 negative. There was either no examination or the result was not given in 7,115 reports. Of the positive recorded findings, 3,671 were reported but once as cases and 875 had been previously reported. Of the negative findings, 731 were reported but a single time and 186 previously. Of the cases with no examination or the result not given, 6,164 were reported once and 951 had been reported previously. The data arranged by counties are given in the accompanying tables. (See tables pp 294–299.)

The reports of sputum examinations made in the Department Laboratories show a total of 7,186 of which 1,622 are positive and 5,549 negative, a ratio of 3.4 negative to one positive.

Both statistical study and field observations indicate a pronounced improvement during the year in the sanitary supervision of reported cases. Of the total number of cases 2,521 were in institutions where such supervision is most effectively maintained.

Including these institutional cases, in 7,827 the attending physician answered "yes" as to carrying out the prescribed procedures and precautions to prevent the spread of the disease, in 374 he answered "no," and in 4,377 he did not answer either way.

Respectfully yours

M. EDGAR ROSE

Supervisor

June 29, 1920

REPORTED TUBERCULOSIS CASES BY AGES FOR YEAR 1919

COUNTY	UNDER 5 YEARS						5-14 YEARS						15-19 YEARS						20-39 YEARS						40-59 YEARS						60 YEARS AND OVER						AGE NOT STATED						NEITHER AGE NOR SEX		
	Male			Female			Male			Female			Male			Female			Male			Female			Male			Female			Male			Female			Male			Female					
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	A	C	A	B	C	A	B	C	A	B	C
Albany	10	..	..	5	..	..	6	..	..	7	..	..	9	4	..	19	3	1	78	18	3	74	27	7	47	5	3	23	6	..	10	..	1	6	..	..	6	1	..	2	2	..	..	..	..
Allegany	..	..	..	..	..	..	4	1	1	1	..	..	1	..	..	3	..	..	4	1	1	9	2	..	3	..	..	2	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	..	..
Broome	4	..	..	3	..	..	5	2	..	4	..	..	7	2	..	12	1	..	46	17	2	38	7	1	26	3	..	19	2	1	11	2	..	6	..	..	..	..	..	1	..	..	..	..	..
Cattaraugus	3	..	..	5	..	..	3	..	..	14	..	..	4	..	..	3	..	..	24	3	..	27	..	..	10	2	..	12	..	..	4	..	..	1	..	..	2	..	..	..	..	..	..	..	..
Cayuga	1	..	..	1	..	..	1	..	..	5	..	..	1	..	..	1	..	..	9	..	..	8	1	..	7	..	..	5	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Chautauqua	4	..	..	9	..	..	3	..	..	3	..	..	8	1	..	8	2	..	37	18	..	28	11	1	17	5	..	18	..	..	7	..	..	6	..	..	..	..	..	..	1	..	..	..	..
Chemung	1	..	..	..	..	..	4	..	..	4	..	..	10	..	..	3	..	..	28	1	1	28	3	1	9	1	..	9	..	..	10	..	..	2	1	..	..	..	..	..	..	..	..	..	..
Chenango	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	3	..	..	..	1	2	5	..	..	5	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Clinton	..	..	..	1	..	..	1	..	..	1	..	..	2	1	..	3	1	..	13	2	1	13	1	1	10	1	..	3	..	..	5	..	..	2	..	..	..	..	..	..	..	..	..	..	..
Columbia	..	1	..	2	..	..	3	..	..	6	..	..	5	..	..	2	..	1	14	1	2	11	1	..	7	..	..	9	1	1	4	1	..	7	..	..	..	..	..	..	..	..	..	..	..
Cortland	1	..	..	..	..	..	..	..	..	2	..	..	1	..	..	1	..	..	6	3	..	7	1	..	2	1	1	5	..	1	4	1	..	1	..	..	1	..	..	..	..	..	..	..	..
Delaware	1	..	..	..	..	..	1	..	..	3	..	..	2	..	..	..	..	..	8	1	1	16	2	..	4	..	1	1	..	1	4	..	..	4	..	..	1	..	..	1	..	..	..	..	..
Dutchess	3	..	..	6	..	..	17	2	..	16	2	..	4	2	2	15	3	..	36	9	1	31	9	7	21	9	1	20	..	..	7	3	..	14	3	1	1	3	..	..	..	..	..	..	1
Erie	61	..	..	41	..	..	68	2	..	64	2	1	55	4	2	52	2	..	301	40	2	220	12	6	228	10	..	49	5	..	33	2	..	13	..	..	49	3	1	44	1	..	..	..	1
Essex	1	..	..	2	..	..	3	..	..	..	1	..	5	1	..	5	..	1	31	9	3	32	3	1	22	2	2	6	..	1	2	..	..	1	..	..	2	..	..	2	1	..	..	..	..
Franklin	1	..	..	..	..	..	4	1	..	9	1	..	42	12	1	30	7	2	498	140	10	384	115	13	160	43	4	66	18	1	4	..	..	1	..	..	9	3	..	14	..	..	..	..	..
Fulton	1	..	..	..	..	..	8	1	..	6	..	..	2	1	..	3	..	..	14	2	2	13	1	..	6	1	..	11	2	1	3	1	..	1	..	..	..	..	..	..	..	..	..	..	..
Genesee	1	1	..	..	..	..	2	..	..	1	..	..	..	..	..	2	4	..	6	4	..	12	8	..	8	3	..	4	..	..	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..
Greene	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	9	3	1	14	..	1	6	3	1	2	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Hamilton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Herkimer	2	..	..	4	..	..	..	..	..	5	..	..	2	..	..	4	..	..	42	9	1	23	3	..	15	4	..	9	..	..	7	..	1	3	..	..	1	..	..	..	1	..	..	..	..
Jefferson	1	..	..	..	..	..	2	1	..	3	1	..	6	1	..	4	1	..	18	3	2	16	5	..	9	2	1	9	..	..	4	..	..	2	..	..	1	1	..	2	1	..	..	..	..
Lewis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	3	..	..	3	1	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Livingston	..	..	..	2	..	..	3	..	..	7	1	..	1	..	..	6	..	..	5	1	..	9	3	..	6	..	..	5	1	..	1	..	..	3	..	1	..	..	..	..	..	..	..	..	..
Madison	1	..	..	1	..	..	1	..	..	3	..	..	2	..	..	2	..	..	4	2	2	6	2	1	2	..	..	5	..	..	2	..	..	3	..	1	1	..	..	..	..	..	..	..	..
Monroe	19	3	..	19	..	..	57	30	1	74	39	1	24	13	..	30	11	1	229	89	4	155	56	4	97	44	1	56	18	1	13	3	..	10	4	..	7	2	..	6	1	..	..	..	..
Montgomery	2	..	..	2	..	..	6	1	1	2	..	..	2	..	..	4	1	..	29	5	..	21	1	1	19	2	..	11	1	..	3	1	..	4	..	..	1	..	..	4	..	..	..	..	..
Nassau	6	..	..	1	..	..	5	..	..	1	1	..	7	1	1	7	..	..	23	5	2	27	7	5	21	2	..	17	2	1	7	1	..	4	1	..	3	..	..	8	..	..	..	..	..

Niagara	9	1		3			15	3		12	2		8	2		15	2	1	64	27	4	46	15	3	42	16	1	14	4		5	1		5	1		1	2		4					
Oneida	17			15	1		14	1		23	1	1	15	2		17	2		109	15	6	89	10	4	40	6	1	29	4		16			12	1		5			4					
Onondaga	1			2			7			5		1	12	3		6	1		85	13	3	74	7	2	61	9	2	28	2		7			16			6			5	1	1			
Ontario	1			1			3			4			1			4	1		13	2		7	2	2	8	5	1	6	1		4			7	1		1	1	1		1				
Orange	2			4	1		5			4			6	1		11	2		46	2	1	48	3	3	32	1		17	3		11			5			2	1							
Orleans													1			1			9	3	2	9	1	1	5	1	1	2			1														
Oswego	1						8			6			9			4			31	1	1	23	4	1	12	5		13	3		11	1		2			1								
Otsego							1		1	2			3			2			8	1		13		2	5	1	1	3			1			3											
Putnam													1						6	2		2	1		2			1	3		3						1								
Rensselaer	2			2			5	1		13			7			12	1		57	14	1	65	7	2	49	9		32	2	1	18	6		7			2			1					
Rockland	2			1			1	1		3			5				1		9	4		10	6	1	12	4	2	11	2		2			2						1					
St Lawrence				1			5			5	1	1	7	1	1	6			27	5	3	22	5		10	4	1	8	1	1	2			4			1			3					
Saratoga	1			4			4	2		2	1		2	2		7	2		49	11	2	46	18	1	38	9		17	6		12	1	1	5	1			1		1	1			11	
Schenectady	3	1		4			10	1		16	2		18	3		17	4	1	55	10	2	72	9		35	3	1	13			5	1		4			31	5	1	15	3			1	1
Schoharie							1			1									3			7	2		1			3			3			1											
Schuyler							1						2			2			3	1								1	1			1		2											
Seneca										3	1	1							9	1		12	3		3	3		7			2			4											
Steuben	2			1			10	4		4			5	1		5			33	6	1	46	4	3	26	8	2	25	5		6			7		1				4					
Suffolk				1			2			6	1		2	1		5	3		37	8		44	8	4	19	4	1	19	4		7			10			7			6					
Sullivan	1						1			9			24	9		32	6		339	106	15	254	81	12	151	50	6	60	20	1	10	1		9	1		4			6	1	1			
Tioga										2			2				1		8	3		4						2			1			2											
Tompkins	1			1			2			4	2		1			3			15	2		17	2	1	7			6	1		8	1		2	1					4					
Ulster	5			2			2			6		1	8			11	5	1	47	14	6	56	9	3	41	6	1	27	5	1	23	1		9	2		1			1					
Warren	1			3			7			5			2			3			20	5	2	20	1	1	9		1	9	1		4			2											
Washington				1			1			1			2			1			17			9	2		7	1		2	2		2	1		1			4								
Wayne	3	2		3			1	3		7	2		1			3			16	5	2	19	5	2	10	4	1	11	1		3			4	1			1							
Westchester	15			8			26	1		30	1		10			28	7		117	18	5	149	26	8	88	17	1	35	4	2	22	4	1	9	1		7	1		2					
Wyoming				1			3			1			1			6	1		19	2		19	1		6			6			3			3			1			2					
Yates	1						1									1	1		6	1		5			5			1			2	3		1	1					1					
Total	193	9		162	2		344	58	4	415	62	7	358	68	8	127	76	9	2777	668	98	2416	512	108	1495	311	39	790	133	15	345	37	4	238	20	4	160	25	3	145	17	2		13	3

Columns A represents cases reported once only.
Columns B represent cases reported previously (duplicates).
Columns C represent cases reported elsewhere subsequently.
Add columns A and C to obtain total "New" cases.

REPORTED TUBERCULOSIS CASES FOR YEAR 1919

COUNTY	Pulmonary												Extra Pulmonary																				
	Incipient			Advanced			Stage not stated			Complicated with other forms			Meninges			Bone and joint			Lymph nodes and glands		Periton-eum			Larnyx			All other forms			Form not stated		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	A	B	C	A	B	C	A	B	C	A	B	C
Albany	63	9	4	82	22	6	97	19	2	7			7			3			2					2			5			34	16	3
Allegany	8	2		19	4	1	1																									1
Broome	33	2	2	67	19	2	18			4	2		4			2					2						6	1		46	12	
Cattaraugus	20	8		48	1		30			1			2			1			4		1						2			3	1	
Cayuga	14		1	15			5	1		2											2			3								
Chautauqua	42	5		54	26	1	27	6		3	1		6			2					2			1			2			9		
Chemung	28			46	2	2	17	2		4	1					1					2			2			5			3	1	
Chenango	2		1	9	1	1	4			2																				1		
Clinton	9	1		17	3		19		2	3	1		2			1					2			1			6			3	1	
Columbia	10		2	44	2	1	10			2			1	1		1					1					1				1	1	
Cortland	9		1	13	1	1	5	4		1			1																	2	1	
Delaware	10			23	2	2	9	1	1	1																	3					
Dutchess	53	4	2	75	20	3	40	16	6	3	3			1		1			1		1	1					5			12	1	1
Erie	189	7	5	324	31	1	508	36	6	16	2		53	1		38			34		21			10	1		21			64	6	
Essex	22	4	2	74	11	6	9			7	2		2														1					
Franklin	224	31	3	917	288	27	23	3		42	15	1												3			1			12	3	
Fulton	13		1	40	7	1	8		1	1	2								1					2			2			1		
Genesee	11	5		18	13		6	1		1	1										1			1			1			1		
Greene	3			21	5	2	7	2	1	2														2			1			3		
Hamilton				2			3		1																							
Herkimer	19	3	1	49	11	1	21	2		4			7			1					1			2			3			10	1	
Jefferson	18	1		32	12		15	3	1							1			2		3			1			1			4		2
Lewis	2			7	2		2																							2		
Livingston	5	2		27	3	1	12	1		2																	1			1		
Madison	8			10	4	2	4		1				2			2					3						4		1			
Monroe	207	89	5	322	160	4	49	36	1	4	2		1			6	2		4	2	2			6	1					195	21	3
Montgomery	24	3		54	8		17	1		2			1			3					1		1	3		1	4			1		
Nassau	22	2	3	66	11	6	17	6		2			5			2					2			2			6			13	1	
Niagara	58	16	1	121	54	8	9	4		5	1		7			10	1							4			6			23		
Oneida	47	3	3	170	22	7	84	10	1	18			12	2		9			8		5			1			14			37	6	1

Onondaga	41	9	1	73	6	...	53	3	...	5	2	...	2	...	...	1	...	...	2	...	1	...	...	...	...	...	5	...	...	132	16	8
Ontario	11	...	...	25	5	2	11	2	...	3	2	...	1	...	...	3	...	...	...	...	1	...	...	1	...	...	1	...	...	3	5	2
Orange	32	2	...	114	9	3	24	1	...	6	...	...	3	1	...	3	...	...	...	...	1	...	...	2	...	...	5	1	...	3	...	1
Orleans	3	...	3	12	2	1	9	3	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...
Oswego	51	1	1	50	8	1	7	4	...	5	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	6	1	...
Otsego	11	...	1	19	2	1	14	...	2	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	2	...	...	3	...	...
Putnam	5	1	...	8	3	...	3	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rensselaer	37	2	1	143	7	2	77	28	1	5	1	...	...	1	...	...	...	...	1	...	...	...	...	1	...	...	2	...	...	6	1	...
Rockland	13	1	2	27	12	1	8	2	...	3	2	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	3	...	...	2	1	...
St. Lawrence	22	1	2	43	13	5	18	2	...	2	...	...	...	...	...	1	...	...	3	...	2	...	...	1	...	...	1	1	...	8	...	...
Saratoga	38	5	...	83	25	4	10	11	...	1	1	...	3	...	...	3	...	...	...	...	2	...	...	1	...	...	4	...	...	43	13	...
Schenectady	68	5	3	107	16	1	10	16	1	5	3	...	3	1	...	4	1	...	1	1	...	...	...	1	...	...	9	1	...	90	8	1
Schoharie	7	...	...	5	2	...	2	...	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	1	...	...	2	...	...
Schuyler	5	1	...	5	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
Seneca	6	1	...	28	7	1	3	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Steuben	59	5	2	58	21	3	27	...	...	11	2	1	3	...	...	3	...	...	2	...	...	...	...	...	...	...	2	...	...	9	...	1
Suffolk	27	2	2	99	24	2	9	...	1	10	1	...	2	...	...	1	...	...	3	...	1	...	...	1	...	...	1	...	...	11	1	...
Sullivan	151	20	3	630	193	25	23	14	1	87	39	6	1	...	...	...	...	...	...	...	...	...	...	3	...	...	1	...	...	4	8	...
Tioga	2	...	...	8	3	...	8	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...
Tompkins	19	2	...	25	3	...	15	2	...	2	...	...	2	1	...	...	...	...	...	...	1	...	...	...	...	...	4	...	1	3	...	...
Ulster	49	10	4	115	21	5	44	8	2	4	...	...	...	...	...	3	...	...	1	...	1	...	...	2	...	...	5	...	1	15	3	1
Warren	29	1	...	37	3	4	11	...	...	1	...	...	4	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	...
Washington	7	2	...	22	3	...	8	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	10	...	...
Wayne	16	7	1	39	12	3	11	4	...	7	1	...	1	...	...	3	...	...	1	...	...	...	...	...	...	...	...	...	...	3	...	1
Westchester	169	14	5	239	56	8	58	7	2	16	1	...	20	...	...	2	...	...	8	...	4	...	...	5	2	1	13	...	...	12	5	...
Wyoming	38	3	...	23	...	...	4	...	...	1	...	...	...	...	...	...	...	...	3	...	1	1	...	...	...	...	1	...	...	...	...	...
Yates	6	...	...	12	6	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...
Total	2,095	287	68	4,815	1,207	158	1,526	263	34	318	89	8	162	9	...	117	4	...	85	3	68	2	1	65	4	3	161	4	3	853	140	26

Columns A represent cases reported once only.
Columns B represent cases reported previously (duplicates).
Columns C represent cases reported elsewhere subsequently.
Add Columns A and C to obtain total "New" cases.

REPORTED TUBERCULOSIS CASES FOR YEAR 1919 — (*Concluded*)

COUNTY	SPUTUM									SANITARY SUPERVISION											
	None			Positive			Negative			Not stated			Yes			No			Institution		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	A
Albany	137	24	5	146	37	10	19	5	......	138	27	4	150	35	9	14	4	2	67	18	3
Allegany	17	1	2	9	4	......	2	1	......	14	1	1	14	5	1	......	......	......	3	1	......
Broome	146	29	1	19	6	2	17	1	1	68	11	1	80	17	3	34	8	......	44	10	2
Cattaraugus	73	1	......	32	3	......	7	1	......	64	2	......	48	3	......	......	......	......	17	1	......
Cayuga	24	1	......	12	......	1	5	......	......	9	1	......	29	......	1	3	......	......	8	......	......
Chautauqua	94	12	1	43	18	......	11	8	......	54	9	......	84	24	1	10	5	......	13	14	......
Chemung	95	3	1	12	1	1	1	2	......	67	2	......	37	3	1	4	1	1	17	1	......
Chenango	10	1	......	6	......	1	2	......	1	8	......	......	10	1	2	......	......	......	3	......	1
Clinton	22	4	1	26	2	1	6	......	......	15	2	......	36	3	2	3	1	......	6	1	......
Columbia	48	2	1	16	2	3	6	......	......	8	1	......	58	3	3	4	......	1	11	1	1
Cortland	20	2	......	9	4	2	2	......	......	11	1	1	16	4	1	4	1	......	5	2	......
Delaware	32	......	2	10	3	1	4	......	......	11	1	1	35	1	2	......	1	......	1	......	......
Dutchess	125	32	6	56	12	6	10	2	......	91	21	10	99	24	2	1	1	......	42	19	......
Erie	1,006	62	9	255	22	3	17	......	......	928	27	10	345	56	2	5	1	......	252	39	......
Essex	62	8	3	46	9	5	7	......	......	13	1	2	98	16	6	4	......	......	13	4	1
Franklin	527	100	16	580	216	14	115	24	1	167	35	21	1,054	304	29	1	1	......	124	60	2
Fulton	44	6	1	20	2	2	4	1	......	9	2	2	30	5	1	29	2	......	6	2	......
Genesee	32	7	......	6	10	......	2	3	......	21	5	......	14	13	......	5	2	......	3	9	......
Greene	19	2	......	20	5	2	......	......	1	15	2	1	24	5	2	......	......	......	2	1	......
Hamilton	1	......	......	4	......	1	......	......	......	3	......	......	2	......	1	......	......	......	......	......	......
Herkimer	66	4	......	36	12	2	15	1	......	44	2	......	66	14	2	7	1	......	19	5	......
Jefferson	29	9	1	40	3	2	8	4	......	18	2	1	57	14	2	2	......	......	19	10	......
Lewis	8	1	......	4	1	......	1	......	......	5	......	......	7	2	......	1	......	......	2	1	......
Livingston	33	4	......	11	2	1	4	......	......	18	1	......	29	4	1	1	......	......	8	3	......
Madison	20	2	2	8	1	2	5	1	......	11	......	......	20	2	4	2	2	......	5	2	......
Monroe	580	168	9	169	78	3	47	67	1	260	66	6	532	245	7	4	2	......	119	190	1
Montgomery	65	6	1	35	4	......	10	2	......	45	3	......	64	10	1	1	......	......	7	2	......
Nassau	84	10	2	47	10	7	6	......	......	37	6	1	88	14	6	12	......	2	14	8	......
Niagara	140	34	1	75	35	7	28	7	1	63	8	......	147	65	8	33	3	1	75	56	3
Oneida	218	20	1	158	20	9	29	3	2	182	18	1	209	25	11	14	......	......	104	14	7

Onondaga	121	6	3	163	27	6	31	8	....	188	16	7	127	20	2	....	1	....	87	16	2
Ontario	35	0	3	21	4	1	4	1	....	6	3	1	54	11	3	....	....	....	24	5	1
Orange	79	5	....	102	8	4	12	1	....	39	1	....	149	12	4	5	1	....	26	5	....
Orleans	17	2	....	7	3	4	4	....	....	11	3	2	17	2	2	....	....	....	4	2	1
Oswego	40	4	....	75	10	2	6	....	....	18	4	2	97	10	....	6	....	....	35	6	....
Otsego	16	1	1	20	1	3	5	....	....	12	1	....	26	1	3	3	....	1	12	2	1
Putnam	14	6	....	1	....	....	1	....	....	4	1	....	12	5	....	....	....	....	2	1	....
Rensselaer	185	35	1	69	5	2	18	....	1	75	18	1	177	22	2	20	....	1	92	15	....
Rockland	31	5	....	24	12	3	4	1	....	16	1	....	42	16	3	1	....	....	9	10	1
St. Lawrence	52	8	2	38	9	5	11	....	....	31	1	5	68	16	2	2	....	....	21	8	....
Saratoga	95	28	3	69	21	1	24	6	....	30	2	1	156	52	3	2	1	....	67	30	1
Schenectady	195	37	3	79	14	3	24	1	....	137	35	2	153	16	4	8	1	....	24	4	....
Schoharie	8	....	....	9	2	....	3	....	....	5	....	....	15	2	....	....	....	....	4	2	....
Schuyler	8	3	....	2	....	....	1	....	....	1	2	....	10	1	....	....	....	....	4	....	....
Seneca	26	7	1	10	1	....	4	....	....	2	....	....	22	4	....	16	4	1	7	....	....
Steuben	121	8	1	36	14	4	17	6	2	59	10	3	112	18	4	3	....	....	20	15	3
Suffolk	68	7	....	78	20	5	19	1	....	27	....	....	134	27	5	4	1	....	72	17	1
S llivan	507	154	11	336	108	23	57	12	1	302	115	59	591	156	23	7	3	....	73	14	2
Tioga	13	2	....	4	2	....	4	....	....	7	1	....	13	3	....	1	....	....	1	....	....
Tompkins	45	4	1	22	3	....	4	1	....	43	4	1	28	4	....	....	....	....	7	2	....
Ulster	154	23	6	68	15	7	17	4	1	97	12	6	124	30	7	18	....	1	22	8	....
Warren	57	2	2	25	4	2	3	1	....	40	3	4	45	4	....	....	....	....	2	2	....
Washington	25	1	....	15	5	....	8	....	....	17	....	....	31	6	....	....	....	....	7	1	....
Wayne	61	13	2	15	7	3	5	4	....	30	7	....	51	17	4	....	....	1	10	10	1
Westchester	222	19	6	285	55	9	39	11	1	123	16	4	410	68	12	13	1	....	140	47	1
Wyoming	63	3	....	8	1	....	....	....	....	41	1	....	30	3	....	....	....	....	6	....	....
Yates	17	4	....	6	2	....	1	....	....	8	2	....	11	3	....	5	1	....	1	1	....
Total	6,052	951	112	3,496	875	175	717	186	14	3,766	516	95	6,187	1,446	194	312	50	12	1,788	697	36

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